

# Safety Data Sheets

CD-HF



Roadyard Douglas

03/23/2018



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# SAFETY DATA SHEET



This Safety Data Sheet (SDS) complies with the requirements of the U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2012) and equivalent state Standards. It has also been developed in accordance with the United Nations Globally Harmonized System of Classification of Chemicals (GHS) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Refer to Section 16 of this document for the definition of terms and abbreviations.

## SECTION 1: IDENTIFICATION

### 1.1 PRODUCT IDENTIFIER

- ITEM NUMBER(S): 950321
- PRODUCT NAME: **1 QT: 21 Glass Cleaner Concentrate**

### 1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE

- RECOMMENDED USE: Cleaner and degreaser.
- IDENTIFIED USERS: For sale to, use and storage by service persons only.

### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

- MANUFACTURER/  
SUPPLIER: **WAXIE Sanitary Supply**
- ADDRESS: 9353 Waxie Way; San Diego, CA 92123-1036
- BUSINESS PHONE: 1-800-995-4466
- EMERGENCY PHONE: 1-800-255-3924 (CHEMTEL; 24 hours)

### 1.4 OTHER PERTINENT INFORMATION

- This product is intended to be used only after dilution. The relevant hazards and safety data are specified for both the **Product as SOLD** and **Product at USE DILUTION**, where appropriate.
- This product is sold and used in relatively small volumes. This SDS has been developed to address safety concerns affecting small volume handling situations and those involving warehouses and workplaces where large numbers of these items are stored or distributed.

## SECTION 2: HAZARD IDENTIFICATION

### 2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

#### OSHA/HCS Status

#### Classification of the Substance or Mixture

#### Product as SOLD

Acute Toxicity (Oral, Category 4); Serious eye damage/Irritation (Category 2A); Skin Irritation (Category 2); Specific target organ toxicity (Category 3, Central nervous system); Aquatic Toxicity (Acute), Category 3

#### Product at USE DILUTION

Eye Damage/Irritation (Category 2B)

### 2.2 LABEL ELEMENTS:

#### ELEMENT

#### Hazard Pictograms

#### Product as SOLD



#### Product at USE DILUTION

Not applicable.

#### Signal Word

WARNING.

WARNING.

#### Hazard Statements

Harmful if swallowed. Causes serious eye and skin irritation. May cause drowsiness or dizziness. Harmful to aquatic life.

Causes eye irritation.

## SECTION 2: HAZARDS IDENTIFICATION (Continued)

### 2.2 LABEL ELEMENTS (Continued):

ELEMENT	Product as SOLD	Product at USE DILUTION
Precautionary Statements		
Prevention	Keep out of reach of children. Wash hands thoroughly after use. . Avoid breathing mists, vapors, sprays. Use only outdoors or in well-ventilated area. Wear eye protection, face protection, protective clothing, and protective gloves. Avoid release into the environment.	Keep out of reach of children. Wash hands thoroughly after handling.
Response	IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists, see a physician. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice. Take off contaminated clothing and wash it before reuse.	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists, see a physician.
Storage	Store in well-ventilated place. Keep cool. Store locked-up. Keep container tightly closed.	Not established; follow guidelines in section 7.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	Not established; follow guidelines in section 13.

### 2.3 OTHER PERTINENT DATA ON CHEMICAL AND PHYSICAL HAZARDS:

- Ingestion of product may cause nausea, vomiting, diarrhea and effects on the central nervous system.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 SUBSTANCES/MIXTURES

CHEMICAL	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR CHEMICAL	% (w/w)
Ammonium Hydroxide	1336-21-6	Acute toxicity, Oral (Category 4), Skin corrosion (Category 1), Serious eye damage (Category 1), H318 Acute aquatic toxicity (Category 1),	Proprietary <sup>1</sup>
Ethanol, 2-Butoxy	111-76-2	Flammable liquids (Category 4); Acute toxicity, Oral (Category 4); Acute toxicity, Inhalation (Category 4); Acute toxicity, Dermal (Category 4); Skin irritation (Category 2); Eye irritation (Category 2A)	Proprietary
Isopropyl alcohol	67-63-0	Flammable liquids (Category 2); Serious eye damage/Irritation (Category 2A); Specific target organ toxicity - single exposure (Category 3, Central nervous system)	Proprietary
Water and other components less than 1% in concentration within this solution. The remaining components of this product are not classified as hazardous in their existing concentrations			Balance

<sup>1</sup> The exact percentage of composition has been withheld as a trade secret. All relevant physical and health hazards have been declared, in accordance with regulatory requirements.

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

#### AREA EXPOSED

##### Eye Contact

#### Product as SOLD

Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Seek medical attention if irritation persists.

#### Product at USE DILUTION

Flush with copious amounts of water. "Roll" eyes during flush. Seek medical attention if irritation persists.

##### Skin Contact

Flush area with warm, running water for several minutes. Seek medical attention if irritation persists.

Flush area with warm, running water for several minutes.

##### Inhalation Ingestion

Obtain fresh air.

Obtain fresh air.

If conscious only: Rinse mouth with water. Drink several cups of water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.

If conscious only: Rinse mouth with water. Drink several cups of water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.

### 4.2 MOST IMPORTANT ACUTE AND CHRONIC EXPOSURE SYMPTOMS

#### • ACUTE HEALTH EFFECTS:

#### AREA EXPOSED

##### Eye Contact

#### Product as SOLD

Causes serious eye irritation.

#### Product at USE DILUTION

May cause eye irritation, depending on the duration of contact, redness and pain may occur.

##### Skin Contact

Causes skin irritation.

Mild skin irritation may occur, depending on duration of contact.

##### Inhalation

May cause respiratory tract irritation; symptoms may include coughing and sneezing depending on volume of mist/spray inhaled.

May cause mild respiratory tract irritation; symptoms may include coughing and sneezing depending on volume of mist/spray inhaled.

##### Ingestion

Causes gastrointestinal system irritation; symptoms may include pain, sore throat, nausea and vomiting if large volumes are ingested.

May cause gastrointestinal system irritation; symptoms may include pain, sore throat, nausea and vomiting.

#### • CHRONIC HEALTH EFFECTS:

#### Product as SOLD

None reported.

#### Product at USE DILUTION

None reported.

#### • TARGET ORGANS:

#### Product as SOLD

Skin, eyes, central nervous system.

#### Product at USE DILUTION

Eyes.

### 4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

The following information is for both **Product AS SOLD** and **Product at USE DILUTION**.

- **GENERAL INFORMATION: For all exposures:** In case of accident, or if you feel unwell, seek medical advice immediately. Take this document and a copy of the label to the healthcare professional.
- **RECOMMENDATIONS TO PHYSICIANS:** Treat symptomatically.
- **MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** None reported.

## SECTION 5: FIREFIGHTING MEASURES

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

### 5.1 EXTINGUISHING MEDIA

- **RECOMMENDED FIRE EXTINGUISHING MEDIA:** Water Spray, Water Jet, Dry Powder, Foam, Carbon Dioxide, Halon, or any other.
- **UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.



## SECTION 5: FIREFIGHTING MEASURES (Continued)

### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

#### • NFPA FLAMMABILITY CLASSIFICATION:

Classification

Product as SOLD

Product at USE DILUTION

NFPA Rating



NFPA Classification

Not flammable.

Not flammable.

#### • UNUSUAL HAZARDS IN FIRE SITUATIONS:

Decomposition

Product as SOLD

Product at USE DILUTION

Generates carbon dioxide, carbon monoxide, and irritating vapors.

Generates carbon dioxide, carbon monoxide, and irritating vapors.

Explosion Sensitivity to Mechanical Impact

Not applicable.

Not applicable.

Explosion Sensitivity to Static Discharge

Not applicable.

Not applicable.

### 5.3 ADVICE FOR FIREFIGHTERS

- Self-Contained Breathing Apparatus and full protective equipment for fire response should be worn in any situation. Move containers from fire area if it can be done without risk to personnel. Otherwise, use water spray to keep fire-exposed containers cool. Because this is product is a cleaning agent, any equipment that comes in contact with this solution can be rinsed thoroughly with water and then returned to service.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

- **RESPONSE TO INCIDENTAL RELEASES:** Personnel who have received basic chemical safety training can generally handle small-scale releases. Gloves and safety glasses must be worn when cleaning-up spills. Use caution during clean-up; contaminated floors and items may be slippery.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** Generally, releases of this product will be no larger than the loss of one shipment of material. Subsequently, personnel can follow the instructions for incidental releases. As needed, respond to non-incident chemical releases of this product (such as the simultaneous destruction of several pallets of this product) by clearing the impacted area and contacting appropriate emergency personnel. In the event that over 3 gallons of this material has spilled, safety goggles with face-shield and air-purifying respirator with High Efficiency Particulate Filter/Organic Vapor cartridge should be worn.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Absorb spilled liquid with polypads or other suitable absorbent materials. Rinse area thoroughly. Because this product is a cleaning, all items that come in contact with the solution can be returned to service after rinsing.

### 6.2 ENVIRONMENTAL PRECAUTIONS

- Avoid response actions that can cause a release of a significant amount of product (more than 4 gallons) into the environment. Avoid accidental dispersal of spilled material into soil, waterways and sewers.

### 6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

- **SPILL RESPONSE EQUIPMENT:** Polypad or other absorbent material.

### 6.4 REFERENCES TO OTHER SECTIONS

- **SECTION 8:** For exposure levels and detailed personal protective equipment recommendations.
- **SECTION 13:** For waste handling guidelines.

## SECTION 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING

ITEM	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Hygiene Practices	Keep out of reach of children. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of vapors, mists and sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.	Keep out of reach of children. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of mists and sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.
Handling Practices	Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use. Keep away from sources of ignition. Take precautionary measures against static discharges. Keep away from heat, sparks, open flames.	Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

ITEM	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Storage Practices	Ensure all containers are correctly labeled. Store containers away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid; therefore, empty containers should be handled with care.	Ensure all containers are correctly labeled. Store containers away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals.
Incompatibilities	See Section 10 (Stability and Reactivity).	See Section 10 (Stability and Reactivity).

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

- **AIRBORNE EXPOSURE LIMITS:**

COMPONENT	ACGIH TLV	OSHA PEL	NIOSH REL	OTHER
Ethanol, 2-Butoxy	TWA = 20 ppm (Skin)	TWA = 50 ppm (Skin)	TWA = 5 ppm (Skin)	NE
Isopropyl alcohol.	TWA= 200 ppm; STEL = 400 ppm	TWA = 400 ppm	TWA= 400 ppm; STEL = 500 ppm	NE






- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** The following BEIs have been established for components of this product.
  - ISOPROPYL ALCOHOL: Acetone in Urine; End of Shift; 40 mg/L

### 8.2 EXPOSURE CONTROLS

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
<b>Engineering Controls</b> <b>Respiratory Protection</b> <b>Hand Protection</b> <b>Eye Protection</b> <b>Body Protection</b>	Use in well-ventilated environment. None normally needed. Neoprene or nitrile gloves. Safety glasses. Standard protection used in janitorial service. If splashes or sprays can occur, a rubber apron should be used.	Use in well-ventilated environment. None normally needed. Neoprene or nitrile gloves Safety glasses. Standard protection used in janitorial service..

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (Continued)

### 8.3 PERSONAL PROTECTION SYMBOLS

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Hand Protection		
Eye/Face Protection		
Body Protection		

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Appearance	Blue liquid.	Clear, light blue liquid.
Odor	Ammonia scented.	Ammonia scent.
Odor Threshold	Not determined.	Not determined.
pH	10-11	Approximately 7
Melting Point/Freezing Point	NE.	Approx. 0°C (32 °F).
Initial Boiling Point/Boiling Range	>100°C (210 °F).	Approximately 100°C (212°F).
Flash Point	Not flammable.	Not applicable.
Evaporation Rate (Water = 1)	Not determined.	Approx. 1.0.
Flammability	Not applicable.	Not applicable.
Upper/Lower Explosive Limits	Not determined.	Not applicable.
Vapor Pressure	Not determined.	Not determined.
Vapor Density	Not determined.	Not determined.
Relative Density (Density)	0.985 (8.25 lb/gal)	Approx. 1.0.
Solubility	Completely soluble in water.	Completely soluble in water.
Partition Coefficient/n-octanol/water	Not determined.	Not determined.
Autoignition Temperature	Not applicable.	Not applicable.
Decomposition Temperature	Not determined.	Not determined.
Viscosity	Not determined.	Not determined.

### 9.2 OTHER INFORMATION

- VOC (less water & exempt): 59 G/L.
- WEIGHT% VOC: 5.9%.

## SECTION 10: STABILITY AND REACTIVITY

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

### 10.1 REACTIVITY

- Not reactive under typical conditions of use or handling.

### 10.2 CHEMICAL STABILITY

- Normally stable under standard temperatures and pressures.

### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

- This product is not self-reactive, water-reactive, or air-reactive.
- This product will not undergo hazardous polymerization.

## SECTION 10: STABILITY AND REACTIVITY (Continued)

### 10.4 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals.

### 10.5 INCOMPATIBLE MATERIALS

- Strong oxidizing agents, ammonia, bleach, strong acids and strong alkali materials.

### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition of this product include carbon monoxide and carbon dioxide.

## SECTION 11: TOXICOLOGICAL INFORMATION

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

### 11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

- **ACUTE TOXICITY:**

- **TOXICOLOGY DATA:** The following data are available for components of this product.

**ISOPROPYL ALCOHOL**

LD<sub>50</sub> (Oral, Rat) = 5,045 mg/kg  
LC<sub>50</sub> (Inhalation – Rat) = 8 hours/ 16000 ppm  
LDLo (Human, Unreported) = 2 mL/kg  
LDLo (Human, Oral) = 3570 mg/Kg

**ETHANOL, 2-BUTOXY**

LD<sub>50</sub> (Oral, Rat) = 470 mg/kg  
LC<sub>50</sub> (Inhalation, Rat) = 4 hours/- 450 ppm  
LD<sub>50</sub> (Dermal, Rabbit) = 220 mg/kg  
LD<sub>50</sub> (Intraperitoneal, Rat) = 220 mg/kg  
LD<sub>50</sub> (Intravenous, Rat) = 307 mg/kg

- **DEGREE OF IRRITATION:** Serious irritant; mild skin irritant. See Section 4 for additional details.
- **SENSITIZATION:** Citrus extracts are reported to be skin sensitizers. However, this component is present in concentrations lower than those reported to cause allergic skin reactions. However, sensitive individuals should minimize prolonged skin contact.
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS BY ROUTE OF EXPOSURE:** See Section 2 (Hazards Information) and Section 4 (First Aid Measures) for additional details.

	<b><u>Product as SOLD</u></b>	<b><u>Product at USE DILUTION</u></b>
<b>Eyes</b>	Causes serious eye irritation.	May cause eye irritation.
<b>Skin</b>	Causes skin irritation.	May cause mild skin irritation, depending on duration of contact.
<b>Inhalation</b>	Causes respiratory tract irritation; symptoms may include coughing and sneezing depending on volume of mist/spray inhaled.	May cause mild respiratory tract irritation.
<b>Ingestion</b>	Causes gastrointestinal system irritation; symptoms may include pain, sore throat, nausea and vomiting if large volumes are ingested.	May cause gastrointestinal system irritation.

## SECTION 11: TOXICOLOGICAL INFORMATION

- **CHRONIC TOXICITY:**

- **REPRODUCTIVE TOXICITY INFORMATION:** The components of this product are not reported to cause reproductive effects under typical circumstances of exposure.
- **MUTAGENIC EFFECTS:** The components of this product are not reported to cause mutagenic effects under typical circumstances of exposure.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Central nervous system.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **ASPIRATION HAZARD:** Not applicable.

## SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

- **CHRONIC TOXICITY:**

- **CARCINOGENICITY STATUS:** The following information is available for components of this product.

CHEMICAL	IARC	NTP	NIOSH	OSH A	OTHER
Isopropyl Alcohol	IARC-3: Unclassifiable as to Carcinogenicity in Humans	NO	NO	NO	TLV-4: Not Classifiable as a Human Carcinogen;
Ethanol, 2-Butoxy	NO	NO	NO	NO	IARC-3: Unclassifiable as to Carcinogenicity in Humans; TLV-4: Not Classifiable as a Human Carcinogen; EPA – NL: Not Likely to Be Carcinogenic to Humans; MAK-4: No Significant Contribution to Human Cancer Risk

- **OTHER INFORMATION:**

- **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
- **ADDITIONAL TOXICOLOGY:** Not applicable.

## SECTION 12: ECOLOGICAL INFORMATION

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

### 12.1 TOXICITY

- Based on available data, this product may be harmful or fatal to contaminated terrestrial or aquatic plants or animals, depending on the volume released into the environment.

**ISOPROPYL ALCOHOL**

LC50 (Pimephales promelas): 9,640.00 mg/L - 96 hours  
 EC50 (Daphnia magna): 5,102.00 mg/L - 24 hours  
 IEC50 (Daphnia magna) : 6,851 mg/L - 24 hours  
 EC50 (Desmodesmus subspicatus) > 2,000.00 mg/L -  
 72 hours

**ETHANOL, 2-BUTOXY**

LC50 - other fish: 220 mg/L - 96 hours  
 EC50 (Daphnia magna): 1,815 mg/L - 24 hours

### 12.2 PERSISTENCE AND DEGRADABILITY

- When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation. The following data are available for components of this product:
  - **OXIRANE POLYMER:** Aerobic - Exposure time 28 days; Result: 60 % - Readily biodegradable.

### 12.3 BIOACCUMULATIVE POTENTIAL

- This product is not anticipated to bioaccumulate significantly.

### 12.4 MOBILITY IN SOIL

- It is to be expected this product will have some mobility in soil.

### 12.5 OTHER ADVERSE EFFECTS

- None reported.

## SECTION 13: DISPOSAL CONSIDERATION

### 13.1 WASTE TREATMENT METHODS

**Product as SOLD**

Dispose of in accordance with local, State and Federal regulations.

**Product at USE DILUTION**

Dispose of unused product in accordance with local, State and Federal regulations.

### 13.2 DISPOSAL CONSIDERATIONS

- **EPA RCRA WASTE CODE:** Not applicable.

## SECTION 14: TRANSPORT INFORMATION

Information in this section is for **Product as SOLD**.

### 14.1 DANGEROUS GOODS BASIC DESCRIPTION AND OTHER TRANSPORT INFORMATION

- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

UN/NA Number	Proper Shipping Name	Packing Group	Hazard Class	Label	North American Emergency Response Guide #	Marine Pollutant Status
NOT APPLICABLE						

- **IATA DESIGNATION:** This product is not regulated as dangerous goods by the International Air Transport Association.
- **IMO DESIGNATION:** This product is not regulated as dangerous goods by the International Maritime Organization.

### 14.2 ENVIRONMENTAL HAZARDS

- None described, as related to transportation.

### 14.3 SPECIAL PRECAUTIONS FOR USERS

- Not applicable.

### 14.4 TRANSPORT IN BULK

- Not applicable.

## SECTION 15: REGULATORY INFORMATION

### 15.1 SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT

- **OTHER IMPORTANT U.S. REGULATIONS**

- **U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** ACUTE: Yes; CHRONIC: No; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No
- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Not applicable.
- **U.S. TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA Inventory.
- **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** Not applicable.

- **INTERNATIONAL REGULATIONS**

- **CANADIAN REGULATORY STATUS:** The product is classified as hazardous under Canadian Controlled Products regulations (SOR-88-66).
  - Classification: D2B – Materials Causing Other Toxic Effects/Toxic
  - This SDS contains all the information required by the CPR.
- **CANADIAN DSL/NDSL INVENTORY STATUS:** The listed components of this product are on the DSL/NDSL Inventory.
- **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this product are not on the CEPA Priorities Substances Lists.
- **GERMAN WATER HAZARD CLASSIFICATION:** 1 (low hazard to waters).



## SECTION 16: OTHER INFORMATION

### 16.1 INDICATION OF CHANGE

- **DATE OF REVISION:** April 27, 2015
- **SUPERCEDES** September 5, 2014
- **CHANGE INDICATED:** Update of OSHA Hazard Communication Standard (29 CFR 1910.1200),

## SECTION 16: OTHER INFORMATION (Continued)

### 16.2 KEY LITERATURE REFERENCES AND SOURCES FOR DATA

- SAFETY DATA SHEETS FOR COMPONENT PRODUCTS.
- Federal OSHA Hazard Communication Standard: 29 CFR 1910.1200.
- SAX – Dangerous Properties of Industrial Materials
- TOXNET – <http://toxnet.nlm.nih.gov/>
- European Chemicals Inventory Classification and Listing: <http://echa.europa.eu>

### 16.3 HAZARDOUS MATERIALS CLASSIFICATION SYSTEM

Product as SOLD		Product at USE DILUTION	
Health	1	Health	0
Flammability	0	Flammability	0
Physical Hazard	0	Physical Hazard	0
Protective Equipment	B/C	Protective Equipment	B

**HMIS Personal Protective Equipment Rating:**  
Occupational Use situations: B- Safety glasses and gloves. C – Add rubber apron if splashes/sprays can occur.

### 16.4 DISCLAIMER

WAXIE Sanitary Supply makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of their own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by WAXIE Sanitary Supply as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does WAXIE Sanitary Supply assume any liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. WAXIE Sanitary Supply does not recommend blending this product with any other chemicals. All information, recommendations and data contained herein concerning this product are based upon information available at the time of writing from recognized technical sources.

### 16.5 ABBREVIATIONS AND ACRONYMS

**ALL SECTIONS:** **OSHA:** U.S. Federal Occupational Safety and Health Administration. **WHMIS:** Canadian Workplace Hazardous Materials Standard. **GHS:** Globally Harmonized System of Classification of Chemical Substances. **REACH:** European Union regulation, Registration, Evaluation, Authorization and Restriction of Chemical substances.

**SECTION 2:** **CAS Number:** Chemical Abstract Service Number, which is used by the American chemical Society to uniquely identify a chemical.

**SECTION 5:** **NFPA:** National Fire Protection Association. **NFPA FLAMMABILITY CLASSIFICATION:** The NFPA uses the flash point (F.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.P. below 73°F and BP below 100°F. Class IB: F.P. below 73°F and BP at or above 100°F. Class IC: F.P. at or above 73°F and BP at or above 100°F. Class II: F.P. at or above 100°F and below 140°F. Class IIIA: F.P. at or above 140°F and below 200°F. Class IIIB: F.P. at or above 200°F. **NFPA HAZARDOUS MATERIALS RATING:** This is a rating system used to summarize physical and health hazards to firefighters. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

**SECTION 8:** **NE:** Not established. **ACGIH:** American Conference of Government Industrial Hygienists; **TWA:** Time-Weighted Average (over an 8-hour work day); **STEL:** Short-Term Exposure Limit (15 minute average, no more than 4-times daily and each exposure separated by one-hour minimally); **C:** Ceiling Limit (concentration not to be exceeded in a work environment). **PEL:** Permissible Exposure Limit. **NIOSH:** National Institute of Occupational Safety and Health; **REL:** Recommended Exposure Limit; **IDLH:** Immediately Dangerous to Life and Health Concentrations. *Note:* In July 1992, a court ruling vacated the more protective PELs set by OSHA in 1989. Because OSHA may enforce the more protective levels under the "general duty clause", both the current and vacated levels are presented in this document. **ppm:** Parts per Million. **mg/m<sup>3</sup>:** Milligrams per cubic meter. **mppcf:** Millions of Particles per Cubic Foot. **BEI:** Biological Exposure Limit

**SECTION 9:** **pH:** Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, pH of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. **FLASH POINT:** Temperature at which a liquid generates enough flammable vapors so that ignition may occur. **AUTOIGNITION TEMPERATURE:** Temperature at which spontaneous ignition occurs.

**SECTION 9 (Continued):** **LOWER EXPLOSIVE LIMIT (LEL):** The minimal concentration of flammable vapors in air which will sustain ignition. **UPPER EXPLOSIVE LIMIT (UEL):** The maximum concentration of flammable vapors in air which will sustain ignition. ≈: Approximately symbol. **VOC:** Volatile Organic Compound.

**SECTION 11:** **CARCINOGENICITY STATUS:** NTP: National Toxicology Program. IARC: International Agency for Research on Cancer. **REPRODUCTIVE TOXICITY INFORMATION:** Mutagen: Substance capable of causing chromosomal damage to cells. Embryotoxin: Substance capable of damaging the developing embryo in an overexposed female. Teratogen: Substance capable of damaging the developing fetus in an overexposed female. Reproductive toxin: Substance capable of adversely affecting male or female reproductive organs or functions. **TOXICOLOGY DATA:** LD<sub>xx</sub> or LC<sub>xx</sub>: The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designate route of administration. This value is used to access the toxicity of chemical substances to humans. TD<sub>xx</sub> or TC<sub>xx</sub>: The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designate route of administration.

**SECTION 12:** **EC50:** Effect Concentration (on 50% of study group); **BOD:** Biological Oxygen Demand. **N/LOEC:** No/Lowest Observable Effect Concentration.

**SECTION 13:** **RCRA:** Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. **EPA RCRA Waste Codes:** Defined in 40 CFR Section 261.

**SECTION 15:** **CERCLA:** Comprehensive Environmental Response Compensation and Liability Act (a.k.a. "Superfund") and SARA: (Superfund Amendment and Reauthorization Act). The regulations promulgated under this Act are located under 40 CFR 300 ff. and provide "community right-to-know" requirements. **TSCA:** Toxic Substances Control Act: Rules regulating the manufacture and sale of chemicals found in 40 CFR 700-766. **DSL/NDSL:** Canadian Domestic Substances and Non-Domestic Substances Lists.

**SECTION 16:** **HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING:** This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

MATERIAL SAFETY DATA SHEET

Product Name: 76 Multipurpose ATF  
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: 76 Multipurpose ATF  
Product Code: 3950000000  
Generic Name: Transmission oil  
Chemical Family: Petroleum hydrocarbon  
Responsible Party: 76 Lubricants Company  
A Division of TOSCO Corporation  
72 Cummings Point Road  
Stamford, CT  
06901

For further information contact Help Desk  
8am - 4pm Pacific Time, Mon-Fri: 1-800-762-0942

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:

For Chemical Emergencies:  
Spill, Leak, Fire or Accident  
Call CHEMTREC  
North America: (800)424-9300  
Others: (703)527-3887 (collect)

For Health Emergencies:  
San Francisco Poison  
Control Center  
Cont. US: (800)356-3129  
Outside US: (415)821-5338

**Health Hazards:** Causes eye and skin irritation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

**Physical Hazards:** This material may burn, but will not ignite readily. Keep away from all sources of ignition.

- ▶ Physical Form: Liquid
- ▶ Appearance: Clear red
- ▶ Odor: Characteristic petroleum

NFPA HAZARD CLASS:	Health:	2 (Moderate)
	Flammability:	1 (Slight)
	Reactivity:	0 (Least)

2. COMPOSITION/INFORMATION ON INGREDIENTS

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Status: Final Revised



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<u>HAZARDOUS COMPONENTS</u>	<u>% Volume</u>	<u>EXPOSURE GUIDELINE</u>		
		<u>Limits</u>	<u>Agency</u>	<u>Type</u>
Hydrotreated Distillate, 0-55 Light Paraffin CAS# 64742-55-8		(See: Oil Mist, If Generated)		
Additive CAS# Proprietary	0 - 10	Not Established		
Solvent Naphtha, Medium Aliphatic CAS# 64742-88-7	0-3.7	(See: Stoddard Solvent)		
Oil Mist, If Generated CAS# None		5 mg/m3 10 mg/m3 5 mg/m3	ACGIH ACGIH OSHA	TWA STEL TWA
Stoddard Solvent CAS# 8052-41-3		100 ppm 500 ppm	ACGIH OSHA	TWA TWA

<u>OTHER COMPONENTS</u>	<u>% Volume</u>	<u>EXPOSURE GUIDELINE</u>		
		<u>Limits</u>	<u>Agency</u>	<u>Type</u>
Hydrotreated Distillate, Heavy Paraffin CAS# 64742-54-7	0-90	(See: Oil Mist, If Generated)		
Solvent Dewaxed Distillate, Heavy Paraffin CAS# 64742-65-0	0-90	(See: Oil Mist, If Generated)		
Solvent Refined Distillate, Light Naphthenic CAS# 64741-97-5	0-88	(See: Oil Mist, If Generated)		
Solvent Refined Distillate, Light Paraffin CAS# 64741-89-5	0-70	(See: Oil Mist, If Generated)		
Solvent Dewaxed Distillate, Light	0-55	(See: Oil Mist, If Generated)		

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Paraffin  
CAS# 64742-56-9

Solvent Refined 0-35 (See: Oil Mist, If Generated)  
Distillate, Heavy  
Paraffin  
CAS# 64741-88-4

Additives 0 - 9 Not Established  
CAS# Proprietary

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

### 3. HAZARDS IDENTIFICATION

#### POTENTIAL HEALTH EFFECTS:

**Eye:** Eye irritant. Contact may cause stinging, watering, redness, and swelling.

**Skin:** Skin irritant. Contact may cause redness, burning, drying and cracking of the skin, and skin damage. No harmful effects from skin absorption are expected.

**Inhalation (Breathing):** Low to moderate degree of toxicity by inhalation.

**Ingestion (Swallowing):** No harmful effects reported from ingestion.

**Signs and Symptoms:** Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract and transient excitation followed by signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, and fatigue).

**Cancer:** Inadequate data available to evaluate the cancer hazard of this material.

**Target Organs:** Inadequate evidence available for this material. See Section 11 for target-organ toxicity information of individual components, if any.

**Developmental:** Inadequate data available for this material.

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**Pre-Existing Medical Conditions:** Conditions aggravated by exposure may include skin disorders and respiratory (asthma-like) disorders.

#### 4. FIRST AID MEASURES

**Eye:** Move victim away from exposure and into fresh air. If irritation or redness develops, flush eyes with clean water and seek medical attention. For direct contact, hold eyelids apart and flush the affected eye(s) with clean water for at least 15 minutes. Seek medical attention.

**Skin:** Wipe material from skin, remove contaminated shoes and clothing and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops, seek medical attention.

**Inhalation (Breathing):** If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**Ingestion (Swallowing):** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Note To Physicians:** Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

#### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Flash Point: 320°F/160°C (COC)  
OSHA Flammability Class: Not applicable  
LEL/UEL: No Data  
Autoignition Temperature: No Data

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**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

**Extinguishing Media:** Dry chemical, carbon dioxide, foam or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

**Fire Fighting Instructions:** For fires beyond the incipient stage, emergency responders in the danger area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should also be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate danger area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from danger area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

## 6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate danger area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local

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agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

## 7. HANDLING AND STORAGE

**Handling:** Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice.

"Empty" containers retain residue (liquid and/or vapor) and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to Occupational Safety and Health Administration Regulations, ANSI Z49.1 and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

**Storage:** Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required. Where explosive

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mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).

**Personal Protective Equipment (PPE):**

**Respiratory:** A NIOSH certified air purifying respirator with a dust/mist filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**Skin:** The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation, and skin damage (see glove manufacturer literature for information on permeability). Depending on conditions of use, apron and/or arm covers may be necessary.

**Eye/Face:** Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

**Other Protective Equipment:** Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn when skin contact is possible.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Flash Point: 320°F / 160°C (COC)  
Flammable/Explosive Limits (%): No Data  
Autoignition Temperature: No Data  
Appearance: Clear red  
Physical State: Liquid

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Odor: Characteristic petroleum  
pH: No Data  
Vapor Pressure (mm Hg): Not determined  
Vapor Density (air=1): >1  
Boiling Point: >490°F / >254°C  
Freezing/Melting Point: No Data  
Solubility in Water: Negligible  
Specific Gravity: 0.87  
Percent Volatile: Negligible  
Evaporation Rate (nBuAc=1): <1  
Viscosity: 7.2 - 8.0 cSt @100°C /33 cSt @ 40°C  
Bulk Density: 7.25 lbs/gal

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal conditions of storage and handling.

**Conditions To Avoid:** Extended exposure to high temperatures can cause decomposition.

**Incompatible Materials:** Avoid contact with strong oxidizing agents.

**Hazardous Decomposition Products:** Combustion can yield oxides of carbon, nitrogen, sulfur and phosphorus.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Hydrotreated Distillate, Light Paraffin (CAS# 64742-55-8)

**Target Organ(s):** Administration of certain mineral hydrocarbon white oils in the diet to Fischer 344 rats at 1500 mg/kg/day for 90 days resulted in the formation of microgranulomas in the liver. However, this response was not observed in studies conducted with other rat strains or dogs. Microgranulomas like those observed in the Fischer 344 rat studies have not been observed in humans.

## 12. DISPOSAL CONSIDERATIONS

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This material under most intended uses would become used oil due to contamination by physical or chemical impurities. RECYCLE ALL USED OIL. While being recycled, used oil is regulated by 40 CFR 279. Use resulting in chemical or physical change or contamination may also subject it to regulation as hazardous waste. Under federal regulations, used oil is a solid waste managed under 40 CFR 279. However, in California, used oil is managed as hazardous waste until tested to show it is not hazardous. Consult state and local regulations regarding the proper handling of used oil. In the case of used oil, the intent to discard it may cause the used oil to be regulated as hazardous waste.

Contents should be completely used and containers emptied prior to discard. Rinsate may be considered a RCRA hazardous waste and must be disposed of with care and in compliance with federal, state and local regulations. Large empty containers, such as drums, should be returned to the distributor or a drum reconditioner. To assure proper disposal of small empty containers, consult with state and local regulations and disposal authorities.

### 13. TRANSPORT INFORMATION

Hazard Class or Division: Not classified as hazardous

### 14. REGULATORY INFORMATION

This material contains the following chemicals subject to the reporting requirements of **SARA** 313 and 40 CFR 372:

--None--

**Warning:** This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of **California Proposition 65** (CA Health & Safety Code Section 25249.5):

<u>COMPONENT</u>	<u>EFFECT</u>
Benzene	Cancer
Toluene	Developmental Toxicant

This material has not been identified as a carcinogen by NTP, IARC, or OSHA.

**EPA (CERCLA) Reportable Quantity:** --None--

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#### 15. DOCUMENTARY INFORMATION

Issue Date: 02/11/98  
Previous Issue Date: 02/02/98  
Product Code: 3950000000  
Previous Product Code: 3950000000

#### 16. DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.** No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

Issue Date: 02/11/98  
Revised Sections: 2, 8

Status: Final Revised



# SAFETY DATA SHEET

## Section 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** ABC Dry Chemical Fire Extinguishant  
**Other Identifiers:** Multi-purpose Dry Chemical  
**Product Code(s):** CH550, F15, F18  
**Model Code(s) for Extinguishers:** 411, 417, 419, 423, 424, 425, 441, 443, 450, 456, 461, 464, 467, 470, 473, 476, 481, 487, 488, 491, 495, 500, 564, 567, 573, 581, 589, 592, 594, 668, 692, 720, 760, 763, 781.  
**Recommended Use:** Fire suppression, not for human or animal drug use.  
**Manufacturer:** AMEREX CORPORATION  
**Internet Address:** [www.amerex-fire.com](http://www.amerex-fire.com)  
**Address:** 7595 Gadsden Highway, P.O. Box 81  
 Trussville, AL 35173-0081  
**Company Telephone:** (205) 655-3271  
**E-mail Address:** info@amerex-fire.com  
**Emergency Contacts:** Chemtrec 1(800) 424-9300 or (703) 527-3887  
**Revised:** May, 2016

## Section 2. HAZARDS IDENTIFICATION

### GHS – Classification

Health	Environmental	Physical
Acute Toxicity: Category 5	None	None
Skin Corrosion/Irritation: Category 3	None	None
Skin Sensitization: NO	None	None
Eye: Category 2B	None	Warning
STOT –Category 3	None	Warning
Carcinogen: Category None	None	None

**GHS – Label Symbol(s):**

**Exclamation Mark**



**GHS – Signal Word(s):**

**Warning**

**Other Hazards Not Resulting in Classification:** None

## GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	None	
Health	H303 316 320 333	May be harmful if swallowed Causes mild skin irritation Causes eye irritation May be harmful if inhaled
Environmental	None	
<b>Precautionary:</b>		
General	P101	If medical advice is needed, have product container or label at hand
Prevention	P261 264	Avoid breathing dust. Wash hands and face thoroughly after handling.
Response	P304+340 305+351+313  337+338  P312	If inhaled, remove person to fresh air and keep comfortable for breathing. If in eyes, rinse cautiously with water for several minutes. Get immediate medical advice/attention (as appropriate). If eye irritation persists: remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell (as appropriate).
Storage	None	

## Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No.	Weight %
Mono-ammonium phosphate	NA	NA	7722-76-1	55-75
Ammonium sulfate	231-984-1	NA	7783-20-2	20-40
Fullers earth magnesium aluminum silicate	NA	Not Available	8031-18-3	<3
Mica- potassium aluminum silicate	NA	Not Available	12001-26-2	1-2
Silicone oil methyl hydrogen polysiloxane	NA	Not Available	63148-57-2	<1
Calcium carbonate	215-279-6	Not Available	1317-65-3	<1
Amorphous silica precipitated synthetic zeolite	262-373-8	Not Available	112926-00-8	<1
Yellow 14 pigment – diazo dye	228-767-9	Not Available	5468-75-7	<1

Emergency overview:

Light yellow, fine solid powder, odorless.

Adverse health effects and symptoms:

Irritant to the respiratory system; Irritating to eyes and skin. Symptoms may include coughing, shortness of breath, and irritation of the lungs, eyes, and skin. Ingestion, although unlikely, may cause cramps, nausea and diarrhea.

### Cut-off Levels

Chemical Name	Reproductive Toxicity	Carcinogenicity	Mutagenicity	Other Hazard Classes
Mono-ammonium Phosphate	NA	NA	NA	NA
Ammonium Sulfate	NA	NA	NA	NA

Fullers earth magnesium aluminum silicate	NA	NA	NA	NA
Mica- potassium aluminum silicate	NA	NA	NA	NA
Silicone oil methyl hydrogen polysiloxane	NA	NA	NA	NA
Calcium carbonate	NA	NA	NA	NA
Amorphous silica precipitated synthetic zeolite	NA	NA	NA	NA
Yellow 14 pigment – di-azo dye	NA	NA	NA	NA

## Section 4. FIRST AID MEASURES

Eye Exposure:

May cause irritation. Irrigate eyes with water and repeat until pain free. Seek medical attention if irritation develops, or if vision changes occur.

Skin Exposure:

May cause skin irritation. In case of contact, wash with plenty of soap and water. Seek medical attention if irritation persists.

Inhalation:

May cause irritation, along with coughing. If respiratory irritation or distress occurs, remove victim to fresh air. Seek medical attention if irritation persists.

Ingestion:

Overdose symptoms may include numbness or tingling in hands or feet, uneven heart rate, paralysis, feeling faint, chest pain or heavy feeling, pain spreading to the arm or shoulder, nausea, diarrhea, sweating, general ill feeling, or seizure (convulsions). If victim is conscious and alert, give 2-3 glasses of water to drink. If conscious, do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.

Medical conditions possibly aggravated by exposure:

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema, or bronchitis. Skin contact may aggravate existing skin disease. Chronic overexposure may cause pneumoconiosis (“dusty lung” disease).

## Section 5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable
Flash Point:	Not determined
Suitable Extinguishing Media:	Non-combustible. Use extinguishing media suitable for surrounding conditions.
Hazardous Combustion Products:	Carbon and sulfur oxides
<u>Explosion Data:</u>	
Sensitivity to Mechanical Impact:	Not sensitive
Sensitivity to Static Discharge:	Not sensitive
Unusual fire/explosion hazards:	In a fire this material may decompose, releasing oxides of carbon, sulfur, potassium and nitrogen (see Section 10).
Protective Equipment and Precautions for Firefighters:	As in any fire, wear self-contained breathing apparatus in pressure-demand, NIOSH approved or equivalent and full protective gear.

## Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin, eyes, and clothing.
Personal Protective Equipment:	Minimum - safety glasses, gloves, and a dust respirator.
Emergency Procedures:	NA
Methods for Containment:	Prevent further leakage or spillage if safe to do so.
Methods for Clean Up:	Avoid dust formation. Clean up released material using vacuum or wet sweep and shovel to minimize generation of dust. Bag and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.
Environmental Precautions:	Prevent material from entering waterways.
Other:	If product is contaminated, use PPE and containment appropriate to the nature of the most toxic chemical/material in the mixture.

## Section 7. HANDLING AND STORAGE

**Personal Precautions:** Use appropriate PPE when handling or maintaining equipment, and wash thoroughly after handling (see Section 8).

**Conditions for Safe Storage/Handling:** Keep product in original container or extinguisher. Contents may be under pressure – inspect extinguisher consistent with product labeling to ensure container integrity.

**Incompatible Products:** Do not mix with other extinguishing agents, particularly potassium bicarbonate and sodium bicarbonate. Incompatible with strong oxidizing agents and strong acids. Do not store in high humidity. Do not combine with chlorine compounds.

## Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	OSHA PEL	ACGIH TLV	DFG MAK *	EU BLV
Mono-ammonium phosphate	PNOC** Total dust, 15 mg/m <sup>3</sup> Respirable fraction, 5 mg/m <sup>3</sup>	PNOC Total dust, 10 mg/m <sup>3</sup> Respirable fraction, 3 mg/m <sup>3</sup>	PNOC Total dust, 4 mg/m <sup>3</sup> Respirable fraction, 1.5 mg/m <sup>3</sup>	NA
Ammonium Sulfate	PNOC** Total dust, 15 mg/m <sup>3</sup> Respirable fraction, 5 mg/m <sup>3</sup>	PNOC Total dust, 10 mg/m <sup>3</sup> Respirable fraction, 3 mg/m <sup>3</sup>	PNOC Total dust, 4 mg/m <sup>3</sup> Respirable fraction, 1.5 mg/m <sup>3</sup>	NA
Mica	6 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>	NR	NA
Fullers Earth	PNOC** Total dust, 15 mg/m <sup>3</sup> Respirable fraction, 5 mg/m <sup>3</sup>	PNOC Total dust, 10 mg/m <sup>3</sup> Respirable fraction, 3 mg/m <sup>3</sup>	PNOC Total dust, 4 mg/m <sup>3</sup> Respirable fraction, 1.5 mg/m <sup>3</sup>	
Silicone oil	NR**	NR	NR	NA
Calcium carbonate	PNOC Total dust, 15 mg/m <sup>3</sup> Respirable fraction, 5 mg/m <sup>3</sup>	PNOC Total dust, 10 mg/m <sup>3</sup> Respirable fraction, 3 mg/m <sup>3</sup>	-----	NA
Amorphous silica	80 mg/m <sup>3</sup> % silica	10 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>	NA
Yellow 14 pigment	NR	NR	NR	NA

\*German regulatory limits \*\*PNOC = Particulates not otherwise classified (ACGIH) also known as Particulates not otherwise regulated (OSHA) \*\*\* NR = Not Regulated. All values are 8 hour time weighted average concentrations.

Engineering Controls:

Showers  
Eyewash stations  
Ventilation systems

Personal Protective Equipment – PPE Code E:

The need for respiratory protection is not probable during short-term exposure. PPE use during production process must be independently evaluated.



Eye/Face Protection:  
Skin and Body Protection:  
Respiratory Protection:

Tightly fitting safety goggles  
Wear protective gloves/coveralls  
If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Use P100 respirators for limited exposure, use air-purifying respirator (APR) with high efficiency particulate air (HEPA) filters for prolonged exposure. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current safety and health requirements. The need for respiratory protection is not likely for short-term use in well ventilated areas. Good personal hygiene practice is essential, such as avoiding food, tobacco products, or other hand-to-mouth contact when handling. Wash thoroughly after handling.

Hygiene Measures:

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Light yellow powder, finely divided odorless solid

Molecular Weight:

NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>: 115.03; (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>: 132.14

Odor:	Odorless
Odor Threshold:	No information available
Decomposition Temperature °C:	100 - 120
Freezing Point °C:	No information available
Initial Boiling Point °C:	No information available
Physical State:	Crystalline Powder
pH:	Mixture approximately 4 to 5; NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> : 4.2 in 0.2 molar solution; (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : 5.5 in 0.1 molar solution
Flash Point °C:	None
Auto-ignition Temperature °C:	None
Boiling Point/Range °C:	Not Applicable
Melting Point/Range °C:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> : 190; (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : 280
Flammability:	Not Flammable
Flammability Limits in Air °C:	Upper – Not Flammable; Lower-Not Flammable
Explosive Properties:	None
Oxidizing Properties:	None
Volatile Component (%vol)	Not Applicable
Evaporation Rate:	Not Applicable
Vapor Density:	Not Applicable
Vapor Pressure:	Not Applicable
Specific gravity at 25 C:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> : 1.80; (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : 1.77
Solubility:	Coated-Not Immediately Soluble in Water
Partition Coefficient:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> Est: -4.11; (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : Est: -0.48
Viscosity:	Not Applicable

NOTE: NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub> – Monoammonium Phosphate; (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>: – Ammonium Sulfate

## Section 10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage and handling conditions.
Reactivity:	
Incompatibles:	Strong alkalis (bases), magnesium, strong oxidizers, isocyanuric acids and chlorine compounds.
Conditions to Avoid:	Storage or handling near incompatibles.
Hazardous Decomposition Products:	Heat of fire may release carbon monoxide, carbon dioxide, and sulfur dioxide. Also ammonia, oxides of phosphorous and nitrogen oxides may be released during decomposition.
Possibility of Hazardous Reactions:	Slight
Hazardous Polymerization	Does not occur



## Section 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	Inhalation, skin, and eye contact.
Symptoms:	
Immediate:	
Inhalation:	Irritation, coughing.
Eyes:	Irritation.
Skin:	Irritation.
Delayed:	Symptoms appear to be relatively immediate
Acute Toxicity:	Relatively non-toxic.
Chronic Toxicity:	
Short-term Exposure:	None known.
Long-term Exposure:	As with all dusts, pneumoconiosis, or "dusty lung" disease, may result from chronic exposure.

### Acute Toxicity Values - Health

Chemical Name	LD50		LC50 (Inhalation)
	Oral	Dermal	
Mono-ammonium phosphate	5750 mg/kg (rat)	>7940 mg/kg (rabbit)	Not available
Ammonium Sulfate	2840 mg/kg (rat)	Not available	Not available
Mica	None	None	None
Fullers Earth	None	None	None
Silicone oil	None	None	None
Calcium carbonate	6450 mg/kg (rat)	500 mg/24 hr (rabbit)	Not available
Amorphous silica	>5000 mg/kg (rat)	>2000 mg/kg (rabbit)	>2.2 mg/L (rat)
Yellow 14 pigment	>17000 mg/kg (rat)	>3000 mg/kg (rat)	>4448 mg/m3 (rat)

Reproductive Toxicity:	This product's ingredients are not known to have reproductive or teratogenic effects.
Target Organs and Effects (TOST):	Respiratory system irritant). This product is a mild irritant to epithelial tissue, (eyes, mucous membranes, skin) and may aggravate dermatitis. No information was found indicating the product causes sensitization.

### Other Toxicity Categories

Chemical Name	Germ Cell Mutagenicity	Carcinogenicity	Reproductive	TOST Single Exp	TOST Repeated Exp	Aspiration
Mono-ammonium phosphate	None	None	None	Cat 3	None	None
Ammonium Sulfate	None	None	None	Cat 3	None	None
Fullers earth	None	None	None	None	None	None
Mica	None	None	None	None	None	None
Silicone oil	None	None	None	None	None	None

Calcium carbonate	None	None	None	None	None	None
Amorphous silica	None	None	None	None	None	None
Yellow 14 pigment	None	None	None	None	None	None

## Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:	Negative effects unknown. Provides nutrient nitrogen and phosphorus to plant life.
Persistence/Degradability:	Degrades rapidly in humid/wet environment.
Probability of rapid biodegradation:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> Est: 0.693 (Rapid); (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : Est: 0.684 (Rapid)
Anaerobic biodegradation probability:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> Est: 0.398 (Slow); (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : Est: 0.398 (Slow)
Bioaccumulation potential:	Low.
Bioconcentration factor:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> : 3.16 L/kg; (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : 3.16 L/kg (wet weight)
Bioaccumulation:	Extent unknown.
Mobility in soil:	Slow evaporation rate; water soluble, may leach to groundwater
Log Koc:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> Est: -1.25; (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : Est: 1.35
Log Koa:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> Est: 16.72; (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : Est: 20.10
Log Kaw:	NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> Est: -20.86; (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> : Est: -19.62

NOTE: NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub> – Mono-ammonium Phosphate; (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>: – Ammonium Sulfate

Other Adverse Ecological Effects: No other known effects at this time

### Aquatic Toxicity Values – Environment – Research

Chemical Name	Acute (LC50)	Chronic (LC50)
Mono-ammonium phosphate	N/A	N/A
Ammonium Sulfate	N/A	N/A
Mica	N/A	N/A
Fullers Earth	N/A	N/A
Silicone oil	N/A	N/A
Calcium carbonate	N/A	N/A
Amorphous silica	N/A	N/A
Yellow 14 pigment	N/A	N/A

### Aquatic Toxicity Values – Environment – Estimates

Chemical Name	Acute (LC50)	EC50
Mono-ammonium phosphate	2,91e+07 mg/L Fish 96 hr; 9.4e+06 mg/l Daphnid 48 hr;	6.70e+05 mg/L Gr. Algae 96 hr
Ammonium Sulfate	2521 mg/L Fish 96 hr; 1244 mg/l Daphnid 48 hr;	518 mg/L Gr. Algae 96 hr
Mica	N/A	N/A
Fullers Earth	N/A	N/A
Silicone oil	N/A	N/A
Calcium carbonate	N/A	N/A
Amorphous silica	N/A	N/A
Yellow 14 pigment	N/A	N/A

### Section 13. DISPOSAL CONSIDERATIONS

Safe Handling	Use appropriate PPE when handling, and wash thoroughly after handling (see Section 8).
Waste Disposal Considerations	Dispose in accordance with federal, state, and local regulations.
Contaminated Packaging	Dispose in accordance with federal, state, and local regulations.

**NOTES:**

This product is not a RCRA characteristically hazardous or listed hazardous waste. Dispose of according to state or local laws, which may be more restrictive than federal laws or regulations. Used product may be altered or contaminated, creating different disposal considerations.

### Section 14. TRANSPORT INFORMATION

UN Number:	NA
UN Proper Shipping Name:	NA
Transport Hazard Class:	NA
Packing Group:	NA
Marine Pollutant?:	NO
IATA	Not regulated
DOT	Not regulated

**NOTES:**

This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada “Transportation of Dangerous Goods” regulations.

**Special Precautions for Shipping:**

If shipped in a stored pressure-type fire extinguisher, and pressurized with a non-flammable, non-toxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class is 2.2, non-flammable, when shipped via highway or rail.

**Section 15. REGULATORY INFORMATION**

**International Inventory Status:** All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes
Japan	MITI	Yes
South Korea	KECL	Yes

**REACH Title VII Restrictions:** No information available

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on Label	Pollution Release and Transfer Registry (Class II)	Pollution Release and Transfer Registry (Class I)	Poison and Deleterious Substances Control Law
Mono-ammonium Phosphate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Ammonium Sulfate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Component	ISHA – Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA – Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) – Toxic Chemicals	Toxic Release Inventory (TRI) – Group I	Toxic Release Inventory (TRI) – Group II
Mono-ammonium Phosphate 7722-76-1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Ammonium Sulphate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Fullers earth magnesium aluminum silicate 8031-18-3 (>4)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Mica-potassium aluminum silicate 120001-26-2 (>2)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Calcium carbonate 471-34-1	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Amorphous silica 69012-64-2	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Yellow 14 pigment 5468-75-7	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

**European Risk and Safety phrases:**

EU Classification:	XN	Irritant
R Phrases:	20 36/37	Harmful by inhalation. Irritating to eyes, respiratory system.
S Phrases:	22 24/25 26 36	Do not breath dust. Avoid contact with skin and eyes In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

**U.S. Federal Regulatory Information:**

**SARA 313:**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) - This product does not contain and chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

None of the chemicals in this product are under SARA reporting requirements or have SARA threshold planning quantities (TPQs) or CERCLA reportable quantities (RQs), or are regulated under TSCA 8(d).

**SARA 311/312 Hazard Categories:**

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard-*	Yes
Reactive Hazard	No

\* - Only applicable if material is in a pressurized extinguisher.

**Clean Water/Clean Air Acts:**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42) or Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61) and Section 112 of the Clean Air Act Amendments of 1990.

**U.S. State Regulatory Information:**

Chemicals in this product are covered under specific State regulations, as denoted below:

- Alaska** - Designated Toxic and Hazardous Substances: None
- California** – Permissible Exposure Limits for Chemical Contaminants: None
- Florida** – Substance List: Mica Dust
- Illinois** – Toxic Substance List: None
- Kansas** – Section 302/303 List: None
- Massachusetts** – Substance List: Mica Dust
- Minnesota** – List of Hazardous Substances: None
- Missouri** – Employer Information/Toxic Substance List: None
- New Jersey** – Right to Know Hazardous Substance List: None
- North Dakota** – List of Hazardous Chemicals, Reportable Quantities: None
- Pennsylvania** – Hazardous Substance List: None
- Rhode Island** – Hazardous Substance List: Mica Dust
- Texas** – Hazardous Substance List: No
- West Virginia** – Hazardous Substance List: None
- Wisconsin** – Toxic and Hazardous Substances: None

California Proposition 65: No component is listed on the California Proposition 65 list.

**Other:**

- |                             |                     |
|-----------------------------|---------------------|
| Mexico – Grade              | No component listed |
| Canada – WHMIS Hazard Class | No component listed |

**Section 16. OTHER INFORMATION**

This SDS conforms to requirements under U.S., U.K., Canadian, Australian, and EU regulations or standards, and conforms to the proposed 2003 ANSI Z400.1 format.

Issuing Date	17-June-2012
Revision Date	4-May-2016
Revision Notes	None

The information herein is given in good faith but no warranty, expressed or implied, is made. Updated by William F. Garvin, CIH.

# Acetylene, dissolved

## Safety Data Sheet P-4559

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Date of issue: 01/01/1979    Revision date: 01/12/2015    Supersedes: 07/01/2014

### SECTION 1: Product and company identification

#### 1.1. Product identifier

Product form : Substance  
 Name : Acetylene, dissolved  
 CAS No : 74-86-2  
 Formula : C<sub>2</sub>H<sub>2</sub>  
 Other means of identification : Acetylen, ethine, ethyne, narycylene

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Industrial use. Use as directed.

#### 1.3. Details of the supplier of the safety data sheet

Praxair, Inc.  
 39 Old Ridgebury Road  
 Danbury, CT 06810-5113 - USA  
 T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146  
[www.praxair.com](http://www.praxair.com)

#### 1.4. Emergency telephone number

Emergency number : Onsite Emergency: 1-800-645-4633

CHEMTREC, 24hr/day 7days/week — Within USA: 1-800-424-9300, Outside USA: 001-703-527-3887 (collect calls accepted, Contract 17729)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

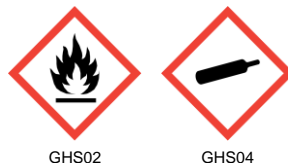
Flam. Gas 1 H220  
 Dissolved gas H280

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H220 - EXTREMELY FLAMMABLE GAS  
 H231 - MAY REACT EXPLOSIVELY EVEN IN THE ABSENCE OF AIR AT ELEVATED PRESSURE AND/OR TEMPERATURE  
 H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED  
 OSHA-H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.  
 CGA-HG04 - MAY FORM EXPLOSIVE MIXTURES WITH AIR

Precautionary statements (GHS-US) :

P202 - Do not handle until all safety precautions have been read and understood  
 P210 - Keep away from heat, Open flames, sparks, hot surfaces. - No smoking  
 P271+P403 - Use and store only outdoors or in a well-ventilated place.  
 P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely  
 P381 - Eliminate all ignition sources if safe to do so  
 P501 - Dispose of contents/container in accordance with container supplier/owner instructions  
 CGA-PG05 - Use a back flow preventive device in the piping.  
 CGA-PG13 - Fusible plugs in the top, bottom, or valve melt at 98°C to 107°C (208°F to 224°F).  
 Do not discharge at pressures above 15 psig (103 kPa).  
 CGA-PG06 - Close valve after each use and when empty.

# Acetylene, dissolved

## Safety Data Sheet P-4559

according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Date of issue: 01/01/1979 Revision date: 01/12/2015 Supersedes: 07/01/2014

CGA-PG11 - Never put cylinders into unventilated areas of passenger vehicles.  
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F).

### 2.3. Other hazards

Other hazards not contributing to the classification : For safety reasons, the acetylene is dissolved in acetone (CAS # 67-64-1; Flam. Liq. 2, Eye Irrit. 2, STOT SE 3) in the gas container. Vapor of the solvent is carried away as impurity when the acetylene is extracted from the gas container. The concentration of the solvent vapor in the gas is lower than the concentration limits to change the classification of the acetylene.

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name	Product identifier	%
Acetylene, dissolved (Main constituent)	(CAS No) 74-86-2	100

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

First-aid measures after skin contact : For exposure to liquid, immediately warm frostbite area with warm water not to exceed 105°F (41°C). Water temperature should be tolerable to normal skin. Maintain skin warming for at least 15 minutes or until normal coloring and sensation have returned to the affected area. In case of massive exposure, remove clothing while showering with warm water. Seek medical evaluation and treatment as soon as possible.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Get immediate medical attention.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

### 4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : See below. See CGA Pamphlet SB-4, Handling Acetylene Cylinders in Fire Situations, for further information.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : EXTREMELY FLAMMABLE GAS. If venting or leaking gas catches fire, do not extinguish flames. Flammable vapors may spread from leak, creating an explosive reignition hazard. Vapors can be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering an area, especially a confined area, check the atmosphere with an appropriate device.

Explosion hazard : EXTREMELY FLAMMABLE GAS. Forms explosive mixtures with air and oxidizing agents.

Reactivity : No reactivity hazard other than the effects described in sub-sections below.



# Acetylene, dissolved

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according to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

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### 5.3. Advice for firefighters

- Firefighting instructions : Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.
- Protection during firefighting : Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen.
- Special protective equipment for fire fighters : Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.
- Specific methods : Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas containers to rupture. Cool endangered containers with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. Stop flow of product if safe to do so. Use water spray or fog to knock down fire fumes if possible. Continue water spray from protected position until container stays cool.
- Other information : Acetylene containers are provided with pressure relief devices designed to vent contents when exposed to elevated temperature.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Wear self-contained breathing apparatus when entering area unless atmosphere is proven to be safe. Evacuate area. Ensure adequate ventilation. Stop leak if safe to do so.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

### 6.3. Methods and material for containment and cleaning up

No additional information available

### 6.4. Reference to other sections

See also sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use only explosion-proof equipment.
- Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

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### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store only where temperature will not exceed 125°F (52°C). Post "No Smoking or Open Flames" signs in storage and use areas. There must be no sources of ignition. Separate packages and protect against potential fire and/or explosion damage following appropriate codes and requirements (e.g., NFPA 30, NFPA 55, NFPA 70, and/or NFPA 221 in the U.S.) or according to requirements determined by the Authority Having Jurisdiction (AHJ). Always secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand when the container is not in use. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. For other precautions in using this product, see section 16.

OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE: When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

Storage area : Acetylene trailers are designed and intended for outdoor use. Acetylene storage in excess of 2.500 cu ft (70.79 cubic meters) is prohibited in buildings and other occupancies.

### 7.3. Specific end use(s)

None.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Acetylene, dissolved (74-86-2)	
ACGIH	Not established
USA OSHA	Not established

### 8.2. Exposure controls

Appropriate engineering controls : An explosion-proof local exhaust system or a mechanical system is acceptable if it can prevent oxygen deficiency and keep hazardous fumes and gases below all applicable exposure limits in the worker's breathing area. During welding, ensure that there is adequate ventilation to keep worker exposure below applicable limits for fumes, gases, and other by-products of welding. Do not breathe fumes or gases. Short-term overexposure to fumes may cause dizziness, nausea, and dryness or irritation of the nose, throat, and eyes, or may cause other similar discomfort.

Eye protection : Wear safety glasses with side shields.

Skin and body protection : As needed for welding, wear hand, head, and body protection to help prevent injury from radiation and sparks. (See ANSI Z49.1.) At a minimum, this includes welder's gloves and protective goggles, and may include arm protectors, aprons, hats, and shoulder protection as well as substantial clothing.

Respiratory protection : When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure (e.g., an organic vapor cartridge). For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).

Thermal hazard protection : Wear cold insulating gloves when transfilling or breaking transfer connections.

Environmental exposure controls : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

Other information : Consider the use of flame resistant anti-static safety clothing. Wear leather safety gloves and safety shoes when handling cylinders.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Gas

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Appearance	: Colorless, odorless gas.
Molecular mass	: 26 g/mol
Color	: Colorless.
Odor	: Garlic like.
Odor threshold	: No data available
pH	: Not applicable.
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable.
Melting point	: -80.8 °C
Freezing point	: No data available
Boiling point	: -84 °C
Flash point	: No data available
Critical temperature	: 36 °C
Auto-ignition temperature	: 305 °C
Decomposition temperature	: 635 °C
Flammability (solid, gas)	: 2.5 - 100 vol %
Vapor pressure	: 4400 kPa
Critical pressure	: 6138 kPa
Relative vapor density at 20 °C	: No data available
Relative density	: Not applicable.
Specific gravity / density	: 0.0012 g/cm <sup>3</sup> (at 0 °C)
Relative gas density	: 0.9
Solubility	: Water: 1185 mg/l
Log Pow	: 0.37
Log Kow	: Not applicable.
Viscosity, kinematic	: Not applicable.
Viscosity, dynamic	: Not applicable.
Explosive properties	: Not applicable.
Oxidizing properties	: None.
Explosive limits	: No data available

### 9.2. Other information

Sublimation point	: -83.3 °C
Gas group	: Dissolved gas

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

### 10.2. Chemical stability

Dissolved in a solvent supported in a porous mass. Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of hazardous reactions

May react explosively even in the absence of air. May decompose violently at high temperature and/or pressure or in the presence of a catalyst. Can form explosive mixture with air. May react violently with oxidants.

### 10.4. Conditions to avoid

High temperature. High pressure. Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

### 10.5. Incompatible materials

Forms explosive acetylides with copper, silver and mercury. Do not use alloys containing more than 65% copper. Air, Oxidizer. Do not use alloys containing more than 43% silver.

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### 10.6. Hazardous decomposition products

Thermal decomposition or burning may produce carbon monoxide, carbon dioxide, and hydrogen. The welding and cutting process may form reaction products such as carbon monoxide and carbon dioxide. Other decomposition products of normal operation originate from the volatilization, reaction, or oxidation of the material being worked.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	:	Not classified
Skin corrosion/irritation	:	Not classified pH: Not applicable.
Serious eye damage/irritation	:	Not classified pH: Not applicable.
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified No known effects from this product.
Aspiration hazard	:	Not classified Not applicable.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : No known ecological damage caused by this product.

### 12.2. Persistence and degradability

#### Acetylene, dissolved (74-86-2)

Persistence and degradability	Will rapidly degrade by indirect photolysis in air. Will not undergo hydrolysis.
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### 12.3. Bioaccumulative potential

#### Acetylene, dissolved (74-86-2)

Log Pow	0.37
Log Kow	Not applicable.
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

### 12.4. Mobility in soil

#### Acetylene, dissolved (74-86-2)

Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.

### 12.5. Other adverse effects

Effect on ozone layer : No known effects from this product.  
Effect on the global warming : No known effects from this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

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### SECTION 14: Transport information

In accordance with DOT

Transport document description : UN1001 Acetylene, dissolved  
 UN-No.(DOT) : UN1001  
 Proper Shipping Name (DOT) : Acetylene, dissolved  
 Hazard labels (DOT) : 2.1 - Flammable gas



DOT Special Provisions (49 CFR 172.102) : N86 - UN pressure receptacles made of aluminum alloy are not authorized.  
 N88 - Any metal part of a UN pressure receptacle in contact with the contents may not contain more than 65% copper, with a tolerance of 1%.

#### Additional information

Emergency Response Guide (ERG) Number : 116 (UN1001)  
 Other information : No supplementary information available.  
 Special transport precautions : Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers:  
 - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

#### Transport by sea

UN-No. (IMDG) : 1001  
 Proper Shipping Name (IMDG) : Acetylene, dissolved  
 Class (IMDG) : 2 - Gases  
 MFAG-No : 116

#### Air transport

UN-No.(IATA) : 1001  
 Proper Shipping Name (IATA) : Acetylene, dissolved  
 Class (IATA) : 2  
 Civil Aeronautics Law : Gases under pressure/Gases flammable under pressure

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

Acetylene, dissolved (74-86-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Sudden release of pressure hazard Reactive hazard Fire hazard

#### 15.2. International regulations

##### CANADA

Acetylene, dissolved (74-86-2)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class F - Dangerously Reactive Material

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### EU-Regulations

#### Acetylene, dissolved (74-86-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Gas 1    H220

Dissolved gas    H280

Full text of H-phrases: see section 16

### 15.2.2. National regulations

#### Acetylene, dissolved (74-86-2)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

### 15.3. US State regulations

#### Acetylene, dissolved(74-86-2)

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

Revision date

: 1/12/2015 12:00:00 AM

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**Other information**

: When using this product in welding and cutting, read and understand the manufacturer's instructions and the precautionary label on the product. Ask your welding products supplier for a copy of Praxair's free safety booklet, P-2035, Precautions and Safe Practices for Gas Welding, Cutting, and Heating, and for other manufacturers' safety publications. For a detailed treatment, get ANSI Z49.1, Safety in Welding, Cutting, and Allied Processes, published by the American Welding Society (AWS), [www.aws.org](http://www.aws.org). Order AWS documents from Global Engineering Documents, [global.ihs.com](http://global.ihs.com). Arcs and sparks can ignite combustible materials. Prevent fires. Refer to NFPA 51B, Standard for Fire Prevention During Welding, Cutting, and Other Hotwork. Do not strike an arc on the container. The defect produced by an arc burn may lead to container rupture.

Fumes and gases produced during welding and cutting processes can be dangerous to your health and may cause serious lung disease. **KEEP YOUR HEAD OUT OF FUMES. DO NOT BREATHE FUMES AND GASES.** Use enough ventilation, local exhaust, or both to keep fumes and gases from your breathing zone and the general area. Short-term overexposure to fumes may cause dizziness, nausea, and dryness or irritation of the nose, throat, and eyes; or may cause other similar discomfort. Contaminants in the air may add to the hazard of fumes and gases.

When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product.

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair SDSs are furnished on sale or delivery by Praxair or the independent distributors and suppliers who package and sell our products. To obtain current SDSs for these products, contact your Praxair sales representative, local distributor, or supplier, or download from [www.praxair.com](http://www.praxair.com). If you have questions regarding Praxair SDSs, would like the document number and date of the latest SDS, or would like the names of the Praxair suppliers in your area, phone or write the Praxair Call Center (Phone: 1-800-PRAXAIR/1-800-772-9247; Address: Praxair Call Center, Praxair, Inc., P.O. Box 44, Tonawanda, NY 14151-0044).

PRAXAIR and the Flowing Airstream design are trademarks or registered trademarks of Praxair Technology, Inc. in the United States and/or other countries.

**Full text of H-phrases:**

Dissolved gas	Gases under pressure Dissolved gas
Flam. Gas 1	Flammable gases Category 1
H220	EXTREMELY FLAMMABLE GAS
H280	CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED

**NFPA health hazard**

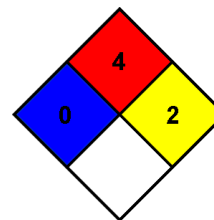
: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

**NFPA fire hazard**

: 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.

**NFPA reactivity**

: 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.





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### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur  
Flammability : 4 Severe Hazard  
Physical : 2 Moderate Hazard

SDS US (GHS HazCom 2012) - Praxair

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*



**MSDS - Material Safety Data Sheet****Product Name: AUTO TRUCK DE-ICER****MSDS No.: DEI****I. Basic Information:**

**Manufacturer:** RADIATOR SPECIALTY COMPANY  
**Address:** 600 RADIATOR ROAD  
**City, ST Zip:** INDIAN TRAIL, NC 28079  
**Country:** USA

**Contact:** Robert Geer  
**Information Telephone Number:** 704-684--181 1  
**Emergency Contact:** RMPDC (877-740-5015)  
**Emergency Telephone Number:** 303-623-5716  
**Emergency Restrictions:**

**Product Name:** AUTO TRUCK DE-ICER  
**MSDS No.:** DE1

**Issue Date:** 01/02/2014  
**Supersedes Date:** 09/12/2008

**II. Hazards Identification:****EMERGENCY OVERVIEW**

POISON. May be Fatal or cause Blindness if Swallowed. Flammable. Vapor Harmful. Eye and Skin Irritant. Contents Under Pressure.

Level 1 Aerosol

**OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Potential Health Effects****Route(s) of Entry:**

Absorption, Eye, Inhalation, and Ingestion.

**Health Hazards (Acute and Chronic):**

Reports have associated repeated and prolonged over-exposure to solvents with permanent brain and nervous system damage. Methanol is a poisonous, narcotic chemical and if ingested can cause blindness and death.

**Signs and Symptoms:**

Eye Contact: May be irritating to eyes  
 Skin Contact: Prolonged exposure may cause dermatitis.  
 Inhalation: Repeated exposure may cause narcosis.  
 Ingestion: Poison, May cause death or blindness.

**Medical Conditions Generally Aggravated by Exposure:**

Over-exposure may cause central nervous system depression.

**Other Health Warnings:**

None Known

**Potential Environmental Effects**

Not Available

**III. Composition/Information on Ingredients:**

Chemical Name	CAS No.	% Range	Trade Secret
Carbon dioxide	124-38-9	1.0 - 5.0	
Ethylene glycol	107-21-1	1.0 - 5.0	
Methanol	67-56-1	40.0 - 70.0	
Morpholine	110-91-8	0.1 - 1.0	

**IV. First Aid Measures:****Emergency and First Aid Procedures:**

# MSDS - Material Safety Data Sheet

## Product Name: *AUTO TRUCK DE-ICER*

**MSDS No.: DEI**

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.  
 Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.  
 Inhalation: Remove to fresh air. If breathing becomes difficult get prompt medical attention.  
 Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

**Note to Physicians:**

N/E

**V. Fire Fighting Measures:**

**Suitable Extinguishing Media:**

Water Fog, Foam, Carbon Dioxide, Dry Chemical

**Unsuitable Extinguishing Media:**

Do not use forced water stream as this could cause the fire to spread.

**Products of Combustion:**

Carbon monoxide, carbon dioxide may form during combustion.

**Protection of Firefighters:**

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

**VI. Accidental Release Measures:**

**Personal Precautions:**

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

**Environmental Precautions:**

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

**Methods for Containment:**

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

**Methods for Cleanup:**

Using a non-metallic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

**Other Information:**

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred.

**VII. Handling and Storage:**

**Handling Precautions:**

Use with adequate ventilation and proper protective equipment.  
 Do not use or store near fire, sparks, or open flame. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.  
 POISON. May be Fatal or cause Blindness if Swallowed. Product can not be made non-poisonous.

**Storage Precautions:**

Avoid contact with oxidizing agents. Avoid contact with eyes. Avoid prolonged or repeated breathing of vapors.

**VIII. Exposure Controls/Personal Protection:**

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Methanol	200 PPM	200 PPM	Not Available
Ethylene glycol	50 ppm	100 mg/m3	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
Morpholine	20 PPM	20 PPM	Not Available

**MSDS - Material Safety Data Sheet****Product Name: AUTO TRUCK DE-ICER****MSDS No.: DE1****Engineering Controls:**

See above Section for applicable exposure limits. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limits.

**Personal Protective Equipment:**

Maintain adequate ventilation. Avoid breathing vapors. For prolonged exposure wear protective safety glasses, gloves, and apron.

**IX. Physical and Chemical Properties:****Boiling Point:** 148°F**Boiling Range:** Not Available**Solubility In Water:** Infinite**Flash Point:** 54°F**Odor Threshold:** Not Available**Vapor Density (AIR = 1):** 1.11**pH Range:** Not Available**Decomposition Temp:** Not Available**Lower Explosive Limit:** 6.0**Specific Gravity (H2O = 1):** 0.79**Other Information:** N/D**Melting Point:** N/A**Freezing Point:** Not Available**Evaporation Rate (Butyl Acetate = 1):** 5.9**Flash Point Method:** TCC**Appearance and Odor:** Clear liquid with alcohol odor**Vapor Pressure (mm Hg.):** N/D**Partition Coefficient:** Not Available**Auto-Ignition Temp:** Not Available**Upper Explosive Limit:** 36.5**X. Stability and Reactivity:****Stability:**

Stable

**Conditions to Avoid:**

See Incompatible Materials below.

**Incompatible Materials:**

Strong oxidizing agents, will attack some forms of plastics and rubber.

**Hazardous Decomposition Products:**

Carbon monoxide, carbon dioxide may form during combustion.

**Possibility of Hazardous Reactions:**

Will not occur.

**XI. Toxicological Information:**

N/D

**XII. Ecological Information:**

N/D

**XIII. Disposal Considerations:**

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

**XIV. Transport Information:****Shipping Name:** See below

# MSDS - Material Safety Data Sheet

**Product Name:** AUTO TRUCK DE-ICER

**MSDS No.:** DE1

**DOT Hazard Class:** Not Available

**DOT Subsidiary Hazard Class:** Not Available

**UN/NA#:** Not Available

**Packing Group:** Not Available

**Transportation Information:**

DOT Hazard Class: ORM-D

Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)

Shipping Name: Aerosols

Class: 2.1

UN number: UN1950

International:

ICAO/IATA

UN number: UN1950

Shipping Name: Aerosols

Class: 2.1

IMDG

UN number: UN1950

Shipping Name: Aerosols

Class: 2.1

EmS: F-D, S-U

**XV. Regulatory Information:**

SARA 313 Reportable Chemicals:

Methanol - 67-56-1

Ethylene Glycol - 107-21-1

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

State RTK Chemicals:

Morpholine - 110-91-8

Methanol - 67-56-1

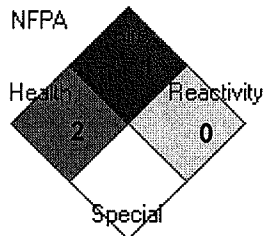
Ethylene Glycol - 107-21-1

**XVI. Other Information:**

**Chemical State:**  Liquid  Gas  Solid

**Chemical Type:**  Pure  Mixture

**Hazard Category:**  
 Acute  Chronic  Fire  Pressure  Reactive

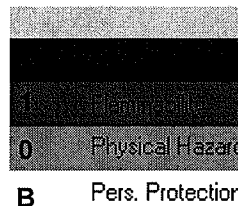


**Additional Manufacturer Warnings:**

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established  
N/D: Not Determined  
N/A: Not Applicable  
N/AV: Not Available

**Additional Product Information:**



## ***MSDS - Material Safety Data Sheet***

***Product Name: AUTO TRUCK DE-ICER***

***MSDS No.: DE1***

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.



# SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

**Product name: BRAKE FLUID 1000**

**Issue Date: 07/06/2015**

**Print Date: 07/08/2015**

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. IDENTIFICATION

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**Product name:** BRAKE FLUID 1000

**Recommended use of the chemical and restrictions on use**

**Identified uses:** A brake fluid - For use in automotive applications.

**COMPANY IDENTIFICATION**

THE DOW CHEMICAL COMPANY  
2030 WILLARD H DOW CENTER  
MIDLAND MI 48674-0000  
UNITED STATES

**Customer Information Number:**

800-258-2436  
SDSQuestion@dow.com

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** 800-424-9300

**Local Emergency Contact:** 800-424-9300

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## 2. HAZARDS IDENTIFICATION

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**Hazard classification**

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Acute toxicity - Category 4 - Oral

Skin irritation - Category 2

Eye irritation - Category 2A

Skin sensitisation - Category 1

Reproductive toxicity - Category 2

Specific target organ toxicity - repeated exposure - Category 2 - Oral

**Label elements**

**Hazard pictograms**



Signal word: **WARNING!**

#### Hazards

Harmful if swallowed.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye irritation.  
 Suspected of damaging fertility or the unborn child.  
 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

#### Precautionary statements

##### Prevention

Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
 Wash skin thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Wear protective gloves/ protective clothing/ eye protection/ face protection.

##### Response

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.  
 IF ON SKIN: Wash with plenty of soap and water.  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 IF exposed or concerned: Get medical advice/ attention.  
 If skin irritation or rash occurs: Get medical advice/ attention.  
 If eye irritation persists: Get medical advice/ attention.  
 Take off contaminated clothing and wash before reuse.

##### Storage

Store locked up.

##### Disposal

Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

no data available

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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This product is a mixture.

Component	CASRN	Concentration
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Triethylene glycol monobutyl ether	143-22-6	> 50.0 - < 60.0 %
Polyethylene glycol monobutyl ether	9004-77-7	> 10.0 - < 20.0 %
Diethylene glycol	111-46-6	> 10.0 - < 20.0 %
Reaction products of diethylene glycol monomethyl ether, ethylene oxide, and propylene oxide	68071-21-6	> 5.0 - < 15.0 %
Diethylene glycol monobutyl ether	112-34-5	< 5.0 %
Piperazine	110-85-0	< 1.0 %
Sodium hydroxide	1310-73-2	< 1.0 %
Bisphenol A	80-05-7	< 1.0 %

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#### 4. FIRST AID MEASURES

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##### Description of first aid measures

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin contact:** Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.

**Eye contact:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Do not induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 Cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounce (1 1/2 tsp.) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight [e.g., 1.2 ounce (2 1/3 tbsp.) for a 40 pound child or 36 ml for an 18 kg child].

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.



**Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Skin contact may aggravate preexisting dermatitis. Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol intoxication may be of benefit. In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and hemodialysis in the treatment. Consult standard literature for details of treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. If burn is present, treat as any thermal burn, after decontamination. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

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**5. FIREFIGHTING MEASURES**

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**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Unsuitable extinguishing media:** no data available

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

**Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep upwind of spill. Ventilate area of leak or spill. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Small spills: Absorb with materials such as: Sand. Vermiculite. Collect in suitable and properly labeled containers. Large spills: Contain spilled material if possible. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor. Do not swallow. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Store in the following material(s): Carbon steel. Stainless steel. Phenolic lined steel drums. Do not store in: Aluminum. Copper. Galvanized iron. Galvanized steel.

### Storage stability

#### Storage temperature:

> 5 - < 35 °C (> 41 - < 95 °F)

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Diethylene glycol	US WEEL	TWA	10 mg/m <sup>3</sup>

Diethylene glycol monobutyl ether	Dow IHG	TWA	35 ppm
	ACGIH	TWA Inhalable fraction and vapor	10 ppm
Piperazine	ACGIH	TWA Inhalable fraction and vapor	0.03 ppm, as piperazine
	ACGIH	TWA	DSEN, RSEN
Sodium hydroxide	ACGIH	C	2 mg/m3
	OSHA Z-1	TWA	2 mg/m3
Bisphenol A	Dow IHG	TWA Inhalable fraction and vapor	2 mg/m3

**Exposure controls**

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures**

**Eye/face protection:** Use chemical goggles.

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material. Use gloves with insulation for thermal protection, when needed. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR").  
 NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. When handling hot material, protect skin from thermal burns as well as from skin absorption.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance**

<b>Physical state</b>	Liquid.
<b>Color</b>	Colorless to white
<b>Odor</b>	Mild
<b>Odor Threshold</b>	No test data available

<b>pH</b>	No test data available
<b>Melting point/range</b>	No test data available
<b>Freezing point</b>	No test data available
<b>Boiling point (760 mmHg)</b>	> 221 °C (> 430 °F) <i>ASTM E1719</i>
<b>Flash point</b>	<b>open cup</b> 135 °C (275 °F) <i>Cleveland Open Cup ASTM D92</i>
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No test data available
<b>Flammability (solid, gas)</b>	No
<b>Lower explosion limit</b>	No test data available
<b>Upper explosion limit</b>	No test data available
<b>Vapor Pressure</b>	No test data available
<b>Relative Vapor Density (air = 1)</b>	No test data available
<b>Relative Density (water = 1)</b>	1.02 <i>ASTM D4052</i>
<b>Water solubility</b>	100 % <i>Estimated.</i>
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Auto-ignition temperature</b>	No test data available
<b>Decomposition temperature</b>	No test data available
<b>Kinematic Viscosity</b>	No test data available
<b>Explosive properties</b>	No test data available
<b>Oxidizing properties</b>	No test data available
<b>Molecular weight</b>	no data available
<b>Volatile Organic Compounds</b>	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** no data available

**Chemical stability:** Thermally stable at typical use temperatures.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

**Incompatible materials:** Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

### **Acute toxicity**

#### **Acute oral toxicity**

Oral toxicity is expected to be moderate in humans due to diethylene glycol even though tests with animals show a lower degree of toxicity. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure.

Single dose oral LD50 has not been determined.

The data presented are for the following material: Diethylene glycol.  
Lethal Dose, Human, adult, 2 Ounces

#### **Acute dermal toxicity**

Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated skin exposure to large quantities may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

The dermal LD50 has not been determined.

#### **Acute inhalation toxicity**

At room temperature, exposure to vapor is minimal due to low volatility. With good ventilation, single exposure is not expected to cause adverse effects. If material is heated or areas are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea.

The LC50 has not been determined.

### **Skin corrosion/irritation**

Prolonged contact may cause skin irritation with local redness.  
May cause drying and flaking of the skin.

### **Serious eye damage/eye irritation**

May cause moderate eye irritation which may be slow to heal.  
May cause slight corneal injury.

### **Sensitization**

A component in this mixture has been shown to be a skin sensitizer.

The data presented are for the following material:

Piperazine.

Individuals who have had an allergic skin reaction to similar materials may have an allergic skin reaction to this product.

The similar material(s) is/are:

Triethylenetetramine (TETA).

A component in this mixture may cause an allergic respiratory response.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Contains component(s) which have been reported to cause effects on the following organs in humans:

Kidney.

Gastrointestinal tract.

In humans, symptoms may include:

Headache.

Nausea and/or vomiting.

Abdominal discomfort.

Contains component(s) which have been reported to cause effects on the following organs in animals:

Liver.

Blood.

**Carcinogenicity**

Diethylene glycol has been tested for carcinogenicity in animal studies and is not believed to pose a carcinogenic risk to man.

**Teratogenicity**

Diethylene glycol has caused toxicity to the fetus and some birth defects at maternally toxic, high doses in animals. Other animal studies have not reproduced birth defects even at much higher doses that caused severe maternal toxicity. Contains component(s) which caused birth defects in laboratory animals only at doses toxic to the mother. Contains component(s) which, in laboratory animals, have been toxic to the fetus only at doses toxic to the mother.

**Reproductive toxicity**

Diethylene glycol did not interfere with reproduction in animal studies except at very high doses. Contains component(s) which have interfered with fertility in animal studies. Contains component(s) which have been shown to interfere with reproduction in animal studies. Bisphenol A affected reproduction in rats and mice, but only at high exposure levels that exceeded the body's capacity to metabolize and deactivate the chemical. Maintaining exposures below appropriate workplace exposure limits should avoid these and other effects.

**Mutagenicity**

Contains a component(s) which were negative in in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

**COMPONENTS INFLUENCING TOXICOLOGY:**

**Triethylene glycol monobutyl ether**

**Acute dermal toxicity**

LD50, Rabbit, 3,540 mg/kg

**Acute inhalation toxicity**

As product: The LC50 has not been determined.

**Polyethylene glycol monobutyl ether**

**Acute dermal toxicity**

The dermal LD50 has not been determined.

Based on information for a similar material: LD50, Rabbit, 3,540 mg/kg

**Acute inhalation toxicity**

At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause severe irritation of upper respiratory tract (nose and throat).

As product: The LC50 has not been determined.

**Diethylene glycol**

**Acute dermal toxicity**

LD50, Rabbit, 13,330 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, dust/mist, > 4.6 mg/l The LC50 value is greater than the Maximum Attainable Concentration. No deaths occurred at this concentration.

**Reaction products of diethylene glycol monomethyl ether, ethylene oxide, and propylene oxide**

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

The LC50 has not been determined.

**Diethylene glycol monobutyl ether**

**Acute dermal toxicity**

LD50, Rabbit, 2,764 mg/kg

**Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to vapor. For respiratory irritation and narcotic effects: No relevant data found.

As product: The LC50 has not been determined.

**Piperazine**

**Acute dermal toxicity**

LD50, Rabbit, > 5,000 mg/kg

**Acute inhalation toxicity**

LC0, Rat, 4 Hour, vapour, 2 mg/l

**Sodium hydroxide**

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

The LC50 has not been determined.

**Bisphenol A**

**Acute dermal toxicity**

LD50, Rabbit, 3,000 mg/kg

**Acute inhalation toxicity**

The LC50 has not been determined.

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## 12. ECOLOGICAL INFORMATION

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*Ecotoxicological information appears in this section when such data is available.*

### Toxicity

#### Triethylene glycol monobutyl ether

##### **Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, *Leuciscus idus* (Golden orfe), static test, 96 Hour, 2,200 - 4,600 mg/l, DIN 38412

##### **Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, > 500 mg/l, OECD Test Guideline 202 or Equivalent

##### **Acute toxicity to algae/aquatic plants**

EC50, *Desmodesmus subspicatus* (green algae), static test, 72 Hour, Growth rate inhibition, 62.5 mg/l, OECD Test Guideline 201 or Equivalent

##### **Toxicity to bacteria**

IC50, Bacteria, static test, 16 Hour, > 5,000 mg/l

#### Polyethylene glycol monobutyl ether

##### **Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
Based on information for a similar material:  
LC50, Fish., semi-static test, 96 Hour, > 1,800 mg/l, OECD Test Guideline 203 or Equivalent

##### **Acute toxicity to aquatic invertebrates**

Based on information for a similar material:  
EC50, *Daphnia magna* (Water flea), static test, 48 Hour, > 3,200 mg/l, OECD Test Guideline 202 or Equivalent

##### **Acute toxicity to algae/aquatic plants**

Based on information for a similar material:  
ErC50, *Scenedesmus capricornutum* (fresh water algae), static test, 72 Hour, Growth rate inhibition, 2,490 mg/l, OECD Test Guideline 201 or Equivalent

##### **Toxicity to bacteria**

IC50, activated sludge, static test, 16 Hour, Growth inhibition, > 5,000 mg/l

#### Diethylene glycol

##### **Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, *Pimephales promelas* (fathead minnow), flow-through test, 96 Hour, 75,200 mg/l, OECD Test Guideline 203 or Equivalent

##### **Toxicity to bacteria**

EC50, activated sludge, 3 Hour, > 1,000 mg/l, OECD 209 Test



**Reaction products of diethylene glycol monomethyl ether, ethylene oxide, and propylene oxide****Acute toxicity to fish**

No relevant data found.

**Diethylene glycol monobutyl ether****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 Hour, 1,300 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, alga Scenedesmus sp., static test, 96 Hour, Growth rate inhibition, > 100 mg/l, OECD Test Guideline 201 or Equivalent  
ErC50, alga Scenedesmus sp., static test, 96 Hour, Biomass, > 100 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, Bacteria, static test, 255 mg/l

**Piperazine****Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).  
LC50, Poecilia reticulata (guppy), semi-static test, 96 Hour, > 1,800 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, 21 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

EC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, > 1,000 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

IC50, Bacteria, 16 Hour, > 5,000 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, 12.5 mg/l

**Sodium hydroxide****Acute toxicity to fish**

May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

**Bisphenol A****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Fathead minnow (*Pimephales promelas*), 96 Hour, 4.6 mg/l  
LC50, Atlantic silverside (*Menidia menidia*), 96 Hour, 9.4 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), 48 Hour, 10.2 mg/l  
EC50, saltwater mysid *Mysidopsis bahia*, 96 Hour, 1.1 mg/l

**Acute toxicity to algae/aquatic plants**

EC50, *Skeletonema costatum*, static test, 96 Hour, Growth rate inhibition, 1.1 mg/l

**Toxicity to bacteria**

EC50, Bacteria, 96 Hour, Respiration rates., > 320 mg/l

**Chronic toxicity to fish**

NOEC, Fathead minnow (*Pimephales promelas*), 164 d, mortality, 0.160 mg/l  
NOEC, *Pimephales promelas* (fathead minnow), 444 d, number of offspring, 0.016 mg/l  
NOEC, *Cyprinodon variegatus* (sheepshead minnow), 116 d, number of offspring, 0.066 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, saltwater mysid *Mysidopsis bahia*, 28 d, number of offspring, 0.17 mg/l  
NOEC, *Marisa cornuarietis* (Giant Ramshorn Snail), 328 d, growth, 0.025 mg/l

**Persistence and degradability****Triethylene glycol monobutyl ether**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Fail

**Biodegradation:** 85 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301D or Equivalent

**Theoretical Oxygen Demand:** 2.10 mg/mg

**Polyethylene glycol monobutyl ether**

**Biodegradability:** Based on information for a similar material: Material is expected to be readily biodegradable.

10-day Window: Pass

**Biodegradation:** 76 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301D or Equivalent

**Photodegradation**

**Sensitizer:** OH radicals

**Atmospheric half-life:** 0.21 d

**Method:** Estimated.

**Diethylene glycol**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

10-day Window: Pass

**Biodegradation:** 90 - 100 %  
**Exposure time:** 20 d  
**Method:** OECD Test Guideline 301A or Equivalent  
 10-day Window: Not applicable  
**Biodegradation:** 82 - 98 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 302C or Equivalent

**Theoretical Oxygen Demand:** 1.51 mg/mg Estimated.

**Reaction products of diethylene glycol monomethyl ether, ethylene oxide, and propylene oxide**

**Biodegradability:** No relevant data found.

**Diethylene glycol monobutyl ether**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.  
 10-day Window: Not applicable  
**Biodegradation:** 89 - 93 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301C or Equivalent  
 10-day Window: Not applicable  
**Biodegradation:** 100 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 302B or Equivalent

**Theoretical Oxygen Demand:** 2.17 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	27 %
10 d	60 %
20 d	81 %

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)  
**Sensitizer:** OH radicals  
**Atmospheric half-life:** 11 Hour  
**Method:** Estimated.

**Piperazine**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.  
 10-day Window: Pass  
**Biodegradation:** 65.3 %  
**Exposure time:** 28 d  
**Method:** OECD Test Guideline 301F or Equivalent

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)  
**Sensitizer:** OH radicals  
**Atmospheric half-life:** 2.8 Hour

Method: Estimated.

### Sodium hydroxide

**Biodegradability:** Biodegradation is not applicable.

### Bisphenol A

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 93.1 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

10-day Window: Not applicable

**Biodegradation:** 87 - 95 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 302A or Equivalent

**Theoretical Oxygen Demand:** 2.52 mg/mg

### **Photodegradation**

**Test Type:** Half-life (direct photolysis)

**Method:** Measured

### **Bioaccumulative potential**

#### Triethylene glycol monobutyl ether

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 0.51 at 20 °C Measured

#### Polyethylene glycol monobutyl ether

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 0.436 at 20 °C Measured

#### Diethylene glycol

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -1.98 at 20 °C Estimated.

**Bioconcentration factor (BCF):** 100 Fish. Measured

#### Reaction products of diethylene glycol monomethyl ether, ethylene oxide, and propylene oxide

**Bioaccumulation:** No bioconcentration of the polymeric component is expected because of its high molecular weight.

#### Diethylene glycol monobutyl ether

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 1 Measured

#### Piperazine

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -1.24 Measured

**Bioconcentration factor (BCF):** < 3.9 Cyprinus carpio (Carp) 42 d Measured

### Sodium hydroxide

**Bioaccumulation:** No bioconcentration is expected because of the relatively high water solubility.

#### **Bisphenol A**

**Bioaccumulation:** Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).

**Partition coefficient: n-octanol/water(log Pow):** 3.4 at 21.5 °C OECD Test Guideline 107 or Equivalent

**Bioconcentration factor (BCF):** 5.1 - 13.3 Cyprinus carpio (Carp) 42 d

#### **Mobility in soil**

##### **Triethylene glycol monobutyl ether**

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient(Koc):** 10 Estimated.

##### **Polyethylene glycol monobutyl ether**

No data available.

##### **Diethylene glycol**

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient(Koc):** < 1 Estimated.

##### **Reaction products of diethylene glycol monomethyl ether, ethylene oxide, and propylene oxide**

No relevant data found.

##### **Diethylene glycol monobutyl ether**

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient(Koc):** 2 Estimated.

##### **Piperazine**

Potential for mobility in soil is low (Koc between 500 and 2000).

**Partition coefficient(Koc):** 507 Measured

##### **Sodium hydroxide**

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient(Koc):** 14 Estimated.

##### **Bisphenol A**

Potential for mobility in soil is low (Koc between 500 and 2000).

**Partition coefficient(Koc):** 636 - 931 Measured

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## **13. DISPOSAL CONSIDERATIONS**

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**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR

SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

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## 14. TRANSPORT INFORMATION

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### DOT

Not regulated for transport

### Classification for SEA transport (IMO-IMDG):

**Transport in bulk  
according to Annex I or II  
of MARPOL 73/78 and the  
IBC or IGC Code**

Not regulated for transport  
Consult IMO regulations before transporting ocean bulk

### Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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### OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Acute Health Hazard  
Chronic Health Hazard

**Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313**

Components	CASRN
Triethylene glycol monobutyl ether	143-22-6
Diethylene glycol monobutyl ether	112-34-5

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103**

This material does not contain any components with a CERCLA RQ.

**Pennsylvania Worker and Community Right-To-Know Act:**

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Components	CASRN
Triethylene glycol monobutyl ether	143-22-6
Diethylene glycol	111-46-6
Diethylene glycol monobutyl ether	112-34-5

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

**United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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**16. OTHER INFORMATION**

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**Hazard Rating System**

**NFPA**

Health	Fire	Reactivity
1	1	0

**Revision**

Identification Number: 101199262 / A001 / Issue Date: 07/06/2015 / Version: 6.1

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
C	Ceiling limit
Dow IHG	Dow Industrial Hygiene Guideline
DSEN, RSEN	Skin and respiratory sensitiser
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
TWA	Time weighted average

US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)
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**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.



## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Cationic Asphalt Emulsion

**Synonyms:** CSS-1, CSS-1H, CSS-1HM, CSS-1HH, CQS-1H, CQS-1F, CSS-1P, CRS-1H, CRS-2, CRS-2S, CRS-2P, CHFRS-2P, CMS-1, CMS-2, CMS-2H, CRS-1HP, CRS-1HM, EBL, NOVABOND, PMCRS-1S, PMCSS-1H, PMCRS-2S, Tack Oil, RoadTac, CSS-1HP

### 1.2. Intended Use of the Product

**Use of the substance/mixture:** Construction

### 1.3. Name, Address, and Telephone of the Responsible Party

#### Company

Vance Brothers

5201 Brighton Ave., P.O. Box 300107

Kansas City, MO 64130

T 816-923-4325/ 800-821-8549 - F 816-923-6472

### 1.4. Emergency Telephone Number

**Emergency Number** : 800-424-9300 (CHEMTREC)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### GHS-US classification

Skin Irrit. 2 H315

Carc. 2 H351

STOT RE 2 H373

Asp. Tox. 1 H304

Aquatic Acute 3 H402

Aquatic Chronic 2 H411

Full text of H-phrases: see section 16

### 2.2. Label Elements

#### GHS-US Labeling

##### Hazard Pictograms (GHS-US)



GHS07

GHS08

GHS09

##### Signal Word (GHS-US)

: Danger

##### Hazard Statements (GHS-US)

: H304 - May be fatal if swallowed and enters airways.

H315 - Causes skin irritation.

H351 - Suspected of causing cancer.

H373 - May cause damage to organs through prolonged or repeated exposure.

H402 - Harmful to aquatic life.

H411 - Toxic to aquatic life with long lasting effects.

##### Precautionary Statements (GHS-US)

: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe vapors, mist, spray.

P264 - Wash hands, forearms, and exposed areas thoroughly after handling.

P273 - Avoid release to the environment.

P280 - Wear eye protection, face shield, protective clothing, protective gloves.

P301+P310 - If swallowed: Immediately call a POISON CENTER, a doctor.

P302+P352 - If on skin: Wash with plenty of water.

P308+P313 - If exposed or concerned: Get medical advice/attention.

P314 - Get medical advice/attention if you feel unwell.

P321 - Specific treatment (see Section 4 on this SDS).

P331 - Do NOT induce vomiting.

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P391 - Collect spillage.

P405 - Store locked up.

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P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

**2.3. Other Hazards** Exposure may aggravate pre-existing eye, skin, or respiratory conditions. If stored under heat for extended periods or significantly agitated, this material might evolve or release hydrogen sulfide, a flammable gas, which can raise and widen this material's actual flammability limits and significantly lower its auto-ignition temperature. Hydrogen sulfide is a toxic gas that can be fatal. It also has a rotten egg smell that causes odor fatigue very quickly and shouldn't be used as an indicator for the presence of gas. Flammable vapors can accumulate in head space of closed systems.

### 2.4. Unknown Acute Toxicity (GHS-US)

10 percent of the mixture consists of ingredient(s) of unknown acute toxicity.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Asphalt	(CAS No) 8052-42-4	45 - 70	Carc. 2, H351
Water	(CAS No) 7732-18-5	30 - 55	Not classified
Proprietary Petroleum Distillate	Proprietary*	< 30	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Carc. 2, H351 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 3, H402 Aquatic Chronic 2, H411

\*The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First Aid Measures

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**First-aid Measures After Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Remove contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Get immediate medical advice/attention. Wash contaminated clothing before reuse. In molten form: Cool skin rapidly with cold water after contact with molten product, Removal of solidified molten material from skin requires medical assistance.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. In molten form: Protect skin and eyes from contact with molten material.

**First-aid Measures After Ingestion:** DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

### 4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** Causes skin irritation. May cause an allergic skin reaction. There are potential chronic health effects to consider. Risk of thermal burns on contact with molten product.

**Symptoms/Injuries After Inhalation:** May cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** May cause eye irritation.

**Symptoms/Injuries After Ingestion:** The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

**Chronic Symptoms:** May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer.

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## 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire. Do not use water when molten material is involved, contact of hot product with water will result in a violent expansion as the water turns to steam causing explosion with massive force.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable. Will not support combustion unless the water has evaporated.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Do not allow run-off from fire fighting to enter drains or water sources. Do not breathe fumes or vapors from fire. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Other Information:** Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid all eyes and skin contact and do not breathe vapor and mist.

#### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Material for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Precautions for Safe Handling:** Avoid breathing vapors, mist, spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Keep from freezing.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

**Incompatible Products:** Strong acids. Strong bases. Strong oxidizers.

**Storage Area:** Store locked up.

### 7.3. Specific End Use(s)

Construction

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Asphalt (8052-42-4)		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup> (fume, inhalable fraction)

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<b>USA ACGIH</b>	ACGIH chemical category	Not Classifiable as a Human Carcinogen fume, coal tar-free
<b>USA ACGIH</b>	Biological Exposure Indices (BEI)	(Medium: urine - Time: end of shift at end of workweek - Parameter: 1-Hydroxypyrene with hydrolysis (nonquantitative))
<b>USA NIOSH</b>	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup> (fume)
<b>Proprietary Petroleum Distillate</b>		
<b>USA ACGIH</b>	ACGIH TWA (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup> (inhalable fraction and vapor)
<b>USA ACGIH</b>	ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans

## 8.2. Exposure Controls

### Appropriate Engineering Controls

: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

### Personal Protective Equipment

: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



### Materials for Protective Clothing

: Chemically resistant materials and fabrics.

### Hand Protection

: Wear chemically resistant protective gloves.

### Eye Protection

: Chemical safety goggles.

### Skin and Body Protection

: Wear suitable protective clothing.

### Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

### Thermal Hazard Protection

: If material is hot, wear thermally resistant protective gloves.

### Environmental Exposure Controls

: Do not allow the product to be released into the environment.

### Other Information

: When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Brown to Black Material
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: Slower (Butyl Acetate=1)
Melting Point	: N/A
Freezing Point	: No data available
Boiling Point	: 100 °C (212 °F)
Flash Point	: > 212 °F (100 °C)
Auto-ignition Temperature	: Not applicable
Decomposition Temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: Not determined
Relative Vapor Density at 20 °C	: > 1 (air=1)
Specific Gravity	: 1 (+/- 0.2 at 60 °F/15.56 °C)
Solubility	: Water: Miscible
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data available
Lower Flammable Limit	: Unknown
Upper Flammable Limit	: Unknown

### 9.2. Other Information

No additional information available

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.

**10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

**10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

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**10.4. Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

**10.5. Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

**10.6. Hazardous Decomposition Products:** May release flammable gases. Thermal decomposition generates : Hydrogen sulfide. Sulfur dioxide. Corrosive vapors.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information On Toxicological Effects

**Acute Toxicity:** Not classified

Asphalt (8052-42-4)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat	> 94.4 mg/m <sup>3</sup>

Proprietary Petroleum Distillate	
LD50 Oral Rat	18.7 - 24.9 ml/kg
LD50 Dermal Rabbit	> 4300 mg/kg
LC50 Inhalation Rat	3.6 mg/l/4h

**Skin Corrosion/Irritation:** Causes skin irritation.

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Suspected of causing cancer.

Asphalt (8052-42-4)	
IARC group	2B
National Toxicology Program (NTP) Status	Twelfth Report - Items under consideration.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** May cause damage to organs through prolonged or repeated exposure.

**Aspiration Hazard:** May be fatal if swallowed and enters airways.

**Symptoms/Injuries After Inhalation:** May cause respiratory irritation.

**Symptoms/Injuries After Skin Contact:** Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** May cause eye irritation.

**Symptoms/Injuries After Ingestion:** The major health threat of ingestion occurs from the danger of aspiration(breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

**Chronic Symptoms:** May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General** : Harmful to aquatic life. Toxic to aquatic life with long lasting effects.

Proprietary Petroleum Distillate	
LC50 Fish 1	57 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

**12.2. Persistence and Degradability** Not established

### 12.3. Bioaccumulative Potential

Asphalt (8052-42-4)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	> 6

**12.4. Mobility in Soil** No additional information available

### 12.5. Other Adverse Effects

**Other Information** : Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Sewage Disposal Recommendations:** Do not empty into drains. Do not dispose of waste into sewer.

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

**Additional Information:** Handle empty containers with care because residual vapors are flammable.

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## SECTION 14: TRANSPORT INFORMATION

### 14.1. In Accordance with DOT

Marine Pollutant : Marine pollutant

### 14.2. In Accordance with IMDG

Marine Pollutant : Marine pollutant

14.3. In Accordance with IATA Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1 US Federal Regulations

<b>Cationic Asphalt Emulsion</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Delayed (chronic) health hazard
<b>Asphalt (8052-42-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>SARA Section 311/312 Hazard Classes</b>	Delayed (chronic) health hazard
<b>Proprietary Petroleum Distillate</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

### 15.2 US State Regulations

<b>Asphalt (8052-42-4)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 12/21/2017

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 3	Flammable liquids Category 3
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H332	Harmful if inhaled
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects

### NFPA Health Hazard

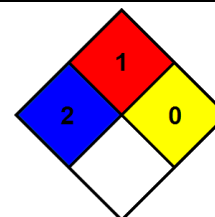
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

### NFPA Fire Hazard

: 1 - Must be preheated before ignition can occur.

### NFPA Reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

SDS US (GHS HazCom)

# Safety Data Sheet



**SECTION 1 PRODUCT AND COMPANY IDENTIFICATION**

## CHEVRON and TEXACO MID-GRADE UNLEADED GASOLINES

**Product Use:** Fuel

**Product Number(s):** 201001, 204041, 204044, 204063, 204096, 204278, 204312, 204313, 204753 [See Section 16 for Additional Product Numbers]

**Synonyms:** Calco Mid-Grade Unleaded Gasoline, Chevron Mid-Grade Unleaded Gasoline, Chevron Plus Unleaded Gasoline, Texaco Power Plus Gasoline

**Company Identification**

Chevron Products Company  
6001 Bollinger Canyon Rd.  
San Ramon, CA 94583  
United States of America

**Transportation Emergency Response**

CHEMTREC: (800) 424-9300 or (703) 527-3887

**Health Emergency**

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

**Product Information**

Product Information: (800) 582-3835  
SDS Requests: [lubemsds@chevron.com](mailto:lubemsds@chevron.com)

SPECIAL NOTES: This MSDS applies to: all motor gasoline.

**SECTION 2 HAZARDS IDENTIFICATION**

**CLASSIFICATION:** Flammable liquid: Category 1. Aspiration toxicant: Category 1. Carcinogen: Category 1A. Target organ toxicant (repeated exposure): Category 1. Eye irritation: Category 2A. Germ Cell Mutagen: Category 1B. Skin irritation: Category 2. Reproductive toxicant (developmental): Category 2. Target organ toxicant (central nervous system): Category 3. Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.



**Signal Word:** Danger

**Physical Hazards:** Extremely flammable liquid and vapor.

**Health Hazards:** May be fatal if swallowed and enters airways. May cause genetic defects. May cause cancer. Causes skin irritation. Causes serious eye irritation. Suspected of damaging the unborn child. May cause drowsiness or dizziness.

**Target Organs:** Causes damage to organs (Blood/Blood Forming Organs) through prolonged or repeated exposure.

**Environmental Hazards:** Toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS:**

**General:** Keep out of reach of children. Read label before use.

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. -- No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

**Response:** IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting. In case of fire: Use media specified in the SDS to extinguish. Specific treatment (see Notes to Physician on this label). Collect spillage.

**Storage:** Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

**Disposal:** Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**HAZARDS NOT OTHERWISE CLASSIFIED:** Not Applicable



### SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %vol/vol
Toluene (methylbenzene)	108-88-3	1 - 35 %vol/vol
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	1330-20-7	1 - 15 %vol/vol
Pentane, 2,2,4-trimethyl- (Isooctane)	540-84-1	1 - 13 %vol/vol
Butane	106-97-8	1 - 12 %vol/vol
Ethanol	64-17-5	0 - 10 %vol/vol
Benzene	71-43-2	0.1 - 4.9 %vol/vol
Hexane	110-54-3	1 - 5 %vol/vol
Heptane	142-82-5	1 - 4 %vol/vol
Ethyl benzene	100-41-4	0.1 - 3 %vol/vol
Cyclohexane	110-82-7	1 - 3 %vol/vol
Naphthalene	91-20-3	0.1 - 2 %vol/vol
Methylcyclohexane	108-87-2	1 - 2 %vol/vol

Motor gasoline is considered a mixture by EPA under the Toxic Substances Control Act (TSCA). The refinery streams used to blend motor gasoline are all on the TSCA Chemical Substances Inventory. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations.

### SECTION 4 FIRST AID MEASURES

#### Description of first aid measures

**Eye:** Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.

**Skin:** Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

**Inhalation:** Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

**Most important symptoms and effects, both acute and delayed**

**IMMEDIATE HEALTH EFFECTS**

**Eye:** Contact with the eyes causes severe irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.

**Skin:** Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.

**Ingestion:** Highly toxic; may be fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

**Inhalation:** Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

**DELAYED OR OTHER HEALTH EFFECTS:**

**Reproduction and Birth Defects:** Contains material that may cause harm to the unborn child if inhaled above the recommended exposure limit.

**Cancer:** Prolonged or repeated exposure to this material may cause cancer. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

**Genetic Toxicity:** Contains material that may cause heritable genetic damage based on animal data.

**Target Organs:** Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit: Blood/Blood Forming Organs Risk depends on duration and level of exposure. See Section 11 for additional information.

**Indication of any immediate medical attention and special treatment needed**

**Note to Physicians:** Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

## SECTION 5 FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Dry Chemical, CO2, AFFF Foam or alcohol resistant foam.

**Unusual Fire Hazards:** See Section 7 for proper handling and storage.

### PROTECTION OF FIRE FIGHTERS:

**Fire Fighting Instructions:** For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Protective Measures:** Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Precautionary Measures:** This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Never siphon gasoline by mouth.

Do not store in open or unlabeled containers. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and

use appropriate mitigating procedures.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

**General Storage Information:** DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

<b>SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION</b>
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**GENERAL CONSIDERATIONS:**

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**ENGINEERING CONTROLS:**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eye/Face Protection:** Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.

**Skin Protection:** Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.

**Respiratory Protection:** Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.

When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Occupational Exposure Limits:**

Component	Agency	TWA	STEL	Ceiling	Notation
Gasoline	ACGIH	300 ppm (weight)	500 ppm (weight)	--	A3
Toluene (methylbenzene)	ACGIH	20 ppm (weight)	--	--	--
Toluene (methylbenzene)	OSHA Z-2	200 ppm (weight)	--	300 ppm (weight)	--
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	ACGIH	100 ppm (weight)	150 ppm (weight)	--	--
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	OSHA Z-1	435 mg/m3	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	OSHA Z-1	2350 mg/m3	--	--	--
Pentane, 2,2,4-trimethyl- (Isooctane)	ACGIH	300 ppm (weight)	--	--	--
Butane	ACGIH	--	1000 ppm (weight)	--	--
Ethanol	ACGIH	1000 ppm (weight)	--	--	A4 A3
Ethanol	OSHA Z-1	1900 mg/m3	--	--	--
Benzene	ACGIH	.5 ppm (weight)	2.5 ppm (weight)	--	Skin A1 Skin
Benzene	OSHA SRS	1 ppm (weight)	5 ppm (weight)	--	--
Benzene	OSHA Z-2	10 ppm (weight)	--	25 ppm (weight)	--
Benzene	CVX	1 ppm (weight)	5 ppm (weight)	--	--
Hexane	ACGIH	50 ppm (weight)	--	--	Skin
Hexane	OSHA Z-1	1800 mg/m3	--	--	--
Heptane	ACGIH	400 ppm (weight)	500 ppm (weight)	--	--
Heptane	OSHA Z-1	2000 mg/m3	--	--	--
Ethyl benzene	ACGIH	20 ppm (weight)	--	--	A3
Ethyl benzene	OSHA Z-1	435 mg/m3	--	--	--
Cyclohexane	ACGIH	100 ppm (weight)	--	--	--
Cyclohexane	OSHA Z-1	1050 mg/m3	--	--	--

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CHEVRON and TEXACO MID-GRADE  
UNLEADED GASOLINES

SDS : 3205

Naphthalene	ACGIH	10 ppm (weight)	15 ppm	--	Skin A3
Naphthalene	OSHA Z-1	50 mg/m3	--	--	--
Methylcyclohexane	ACGIH	400 ppm (weight)	--	--	--
Methylcyclohexane	OSHA Z-1	2000 mg/m3	--	--	--

Consult local authorities for appropriate values.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Attention: the data below are typical values and do not constitute a specification.**

**Color:** Colorless to yellow

**Physical State:** Liquid

**Odor:** Petroleum odor

**Odor Threshold:** No data available

**pH:** Not Applicable

**Vapor Pressure:** 5 psi - 15 psi (Typical) @ 37.8 °C (100 °F)

**Vapor Density (Air = 1):** 3 - 4 (Typical)

**Initial Boiling Point:** 27.2°C (81°F) - 204.4°C (400°F) (Typical)

**Solubility:** Insoluble in water; miscible with most organic solvents.

**Freezing Point:** Not Applicable

**Melting Point:** Not Applicable

**Specific Gravity:** 0.70 g/ml - 0.80 g/ml @ 15.6°C (60.1°F) (Typical)

**Viscosity:** <1 SUS @ 37.8°C (100°F)

**Evaporation Rate:** No data available

**Decomposition temperature:** No data available

**Octanol/Water Partition Coefficient:** 2 - 7

### FLAMMABLE PROPERTIES:

**Flammability (solid, gas):** No Data Available

**Flashpoint:** (Tagliabue Closed Cup ASTM D56) < -45 °C (< -49 °F)

**Autoignition:** > 280 °C (> 536 °F)

**Flammability (Explosive) Limits (% by volume in air):** Lower: 1.4 Upper: 7.6

## SECTION 10 STABILITY AND REACTIVITY

**Reactivity:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility With Other Materials:** Not applicable

**Hazardous Decomposition Products:** None known (None expected)  
**Hazardous Polymerization:** Hazardous polymerization will not occur.

**SECTION 11 TOXICOLOGICAL INFORMATION**

**Information on toxicological effects**

**Serious Eye Damage/Irritation:** The eye irritation hazard is based on evaluation of data for product components.

**Skin Corrosion/Irritation:** For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8/8.0.

**Skin Sensitization:** This material did not cause skin sensitization reactions in a Buehler guinea pig test.

**Acute Dermal Toxicity:** LD50: >3.75 g/kg (rabbit).

**Acute Oral Toxicity:** LD50: >5 ml/kg (rat).

**Acute Inhalation Toxicity:** 4 hour(s) LD50: >20000 mg/m3 (rat).

**Acute Toxicity Estimate:** Not Determined

**Germ Cell Mutagenicity:** The hazard evaluation is based on data for components or a similar material.

**Carcinogenicity:** The hazard evaluation is based on data for components or a similar material. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

**Reproductive Toxicity:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Single Exposure:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Repeated Exposure:** The hazard evaluation is based on data for components or a similar material.

**ADDITIONAL TOXICOLOGY INFORMATION:**

Gasolines are highly volatile and can produce significant concentrations of vapor at ambient temperatures. Gasoline vapor is heavier than air and at high concentrations may accumulate in confined spaces to present both safety and health hazards. When vapor exposures are low, or short duration and infrequent, such as during refueling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor is potentially high, attention should be paid to potential toxic effects of specific components. Information about specific components in gasoline can be found in Sections 2/3, 8 and 15 of this MSDS. More detailed information on the health hazards of specific gasoline components can be obtained calling the Chevron Emergency Information Center (see Section 1 for phone numbers).

Pathological misuse of solvents and gasoline, involving repeated and prolonged exposure to high concentrations of vapor is a significant exposure on which there are many reports in the medical literature. As with other solvents, persistent abuse involving repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments.

Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has caused increased liver tumors in female mice and kidney cancer in male rats. In their 1988 review of carcinogenic risk from gasoline, The International Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself. Although IARC allocated gasoline a final overall classification of Group 2B, i.e. possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene. The actual evidence for carcinogenicity in humans was considered inadequate.

**MUTAGENICITY:** Gasoline was not mutagenic, with or without activation, in the Ames assay (*Salmonella typhimurium*), *Saccharomyces cerevisiae*, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes. Gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chromosomal aberrations in their bone marrow cells.

**EPIDEMIOLOGY:** To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality study (Publication 4555), a nested case-control study (Publication 4551), and an exposure assessment study (Publication 4552). Histories of exposure to gasoline were reconstructed for cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. The results of the cohort mortality study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure. In particular, neither duration of employment, duration of exposure, age at first exposure, year of first exposure, job category, cumulative exposure, frequency of peak exposure, nor average intensity of exposure had any effect on kidney cancer or leukemia mortality. The results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline



at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

This product contains ethylbenzene.

**BIRTH DEFECTS AND REPRODUCTION:** Ethylbenzene is not expected to cause birth defects or other developmental effects based on well-conducted studies in rabbits and rats sponsored by NIOSH. Other studies in rats and mice which reported urinary tract malformations have many deficiencies and have limited usefulness in evaluating human risk. Reproductive effects are not expected based on a NIOSH study of fertility, and lack of effects observed for sperm counts and motility, estrous cycle and pathology of reproductive organs following repeated exposures. **HEARING:** Statistically significant losses in outer hair cells (OHCs) were observed in rats exposed to  $\geq 200$  ppm ethylbenzene, 6 hours/day, 6 days/week for 13 weeks, after an 8-week recovery period. Following longer exposure, inner hair cells losses were also observed in rats exposed to  $\geq 600$  ppm ethylbenzene, but only occasionally in rats exposed to 400 ppm. The Lowest Observed Adverse Effect Level in rats (LOAEL) was 200 ppm for losses of OHCs. Guinea pigs exposed to ethylbenzene at 2,500 ppm, 6 hours/day for 5 days did not show auditory deficits or losses in OHCs. The concentration of ethylbenzene used in the JP-8 study was approximately 10 ppm. **GENETIC TOXICITY:** Ethylbenzene tested negative in the bacterial mutation test, Chinese Hamster Ovary (CHO) cell in vitro assay, sister chromatid exchange assay and an unscheduled DNA synthesis assay. Conflicting results have been reported for the mouse lymphoma cell assay. Increased micronuclei were reported in an in vitro Syrian hamster embryo cell assay; however, two in vivo micronuclei studies in mice were negative. In Syrian hamster embryo cells in vitro, cell transformation was observed at 7 days of incubation but not at 24 hours. Based on these results, ethylbenzene is not expected to be mutagenic or clastogenic. **CARCINOGENICITY:** In studies conducted by the National Toxicology Program, rats and mice were exposed to ethylbenzene at 25, 250 and 750 ppm for six hours per day, five days per week for 103 weeks. In rats exposed to 750 ppm, the incidence of kidney tubule hyperplasia and tumors was increased. Testicular tumors develop spontaneously in nearly all rats if allowed to complete their natural life span; in this study, the development of these tumors appeared to be enhanced in male rats exposed to 750 ppm. In mice, the incidences of lung tumors in males and liver tumors in females exposed to 750 ppm were increased as compared to control mice but were within the range of incidences observed historically in control mice. Other liver effects were observed in male mice exposed to 250 and 750 ppm. The incidences of hyperplasia were increased in the pituitary gland in female mice at 250 and 750 ppm and in the thyroid in male and female mice at 750 ppm.

This product contains toluene.

**GENERAL TOXICITY:** The primary effects of exposure to toluene in animals and humans are on the central nervous system. Solvent abusers, who typically inhale high concentrations (thousands of ppm) for brief periods of time, in addition to experiencing respiratory tract irritation, often suffer permanent central nervous system effects that include tremors, staggered gait, impaired speech, hearing and vision loss, and changes in brain tissue. Death in some solvent abusers has been attributed to cardiac arrhythmias, which appear to be have been triggered by epinephrine acting on solvent sensitized cardiac tissue. Although liver and kidney effects have been seen in some solvent abusers, results of animal testing with toluene do not support these as primary target organs.

**HEARING:** Humans who were occupationally exposed to concentrations of toluene as low as 100 ppm for long periods of time have experienced hearing deficits. Hearing loss, as demonstrated using behavioral

and electrophysiological testing as well as by observation of structural damage to cochlear hair cells, occurred in experimental animals exposed to toluene. It also appears that toluene exposure and noise may interact to produce hearing deficits.

**COLOR VISION:** In a single study of workers exposed to toluene at levels under 50 ppm, small decreases in the ability to discriminate colors in the blue-yellow range have been reported for female workers. This effect, which should be investigated further, is very subtle and would not likely have been noticed by the people tested.

**REPRODUCTIVE/DEVELOPMENTAL TOXICITY:** Toluene may also cause mental and/or growth retardation in the children of female solvent abusers who directly inhale toluene (usually at thousands of ppm) when they are pregnant. Toluene caused growth retardation in rats and rabbits when administered at doses that were toxic to the mothers. In rats, concentrations of up to 5000 ppm did not cause birth defects. No effects were observed in the offspring at doses that did not intoxicate the pregnant animals. The exposure level at which no effects were seen (No Observed Effect Level, NOEL) is 750 ppm in the rat and 500 ppm in the rabbit.

This product contains xylene.

**ACUTE TOXICITY:** The primary effects of exposure to xylene in animals and humans are on the central nervous system. In addition, in some individuals, xylene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation. **DEVELOPMENTAL TOXICITY:** Xylene has been reported to cause developmental toxicity in rats and mice exposed by inhalation during pregnancy. The effects noted consisted of delayed development and minor skeletal variations. In addition, when pregnant mice were exposed by ingestion to a level that killed nearly one-third of the test group, lethality (resorptions) and malformations (primarily cleft palate) occurred. Since xylene can cross the placenta, it may be appropriate to prevent exposure during pregnancy. **GENETIC TOXICITY/CARCINOGENICITY:** Xylene was not genotoxic in several mutagenicity testing assays including the Ames test. In a cancer study sponsored by the National Toxicology Program (NTP), technical grade xylene gave no evidence of carcinogenicity in rats or mice dosed daily for two years. **HEARING:** Mixed xylenes have been shown to cause measurable hearing loss in rats exposed to 800 ppm in the air for 14 hours per day for six weeks. Exposure to 1450 ppm xylene for 8 hours caused hearing loss while exposure to 1700 ppm for 4 hours did not. Although no information is available for lower concentrations, other chemicals that cause hearing loss in rats at relatively high concentrations do not cause hearing loss in rats at low concentrations. Worker exposure to xylenes at the permissible exposure limit (100 ppm, time-weighted average) is not expected to cause hearing loss.

This product contains naphthalene.

**GENERAL TOXICITY:** Exposure to naphthalene has been reported to cause methemoglobinemia and/or hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.

**REPRODUCTIVE TOXICITY AND BIRTH DEFECTS:** Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. **GENETIC TOXICITY:** Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests. **CARCINOGENICITY:** In a study conducted by the National Toxicology Program (NTP), mice exposed

to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

This product contains cyclohexane.

Cyclohexane primarily affects the central nervous systems of laboratory animals and humans. Acute or prolonged inhalation of cyclohexane at levels below the recommended exposure limits does not result in toxic effects while acute exposures to levels above these recommended limits can cause reversible central nervous system depression. Prolonged exposures of laboratory animals to high levels (up to low thousands of parts per million) have also caused reversible effects which included hyperactivity, diminished response to stimuli, and adaptive liver changes while very high levels (high thousands of parts per million) were fatal. No developmental effects were seen in rats or rabbits following exposures of up to 7000 ppm cyclohexane. No reproductive effects occurred in rats, although postnatal pup growth was reduced at 7000 ppm in a similar manner as observed in the parental animals. Cyclohexane has not been shown to be mutagenic in several in vitro and in vivo assays and has not produced tumors in several dermal application long-term bioassays. Based on these results and the lack of any mutagenic or genotoxic metabolites, cyclohexane is not expected to be mutagenic or genotoxic. Following dermal exposure, cyclohexane is rapidly absorbed, metabolized, and excreted.

This product contains ethanol (ethyl alcohol).

Chronic ingestion of ethanol can damage the liver, nervous system and heart. Chronic heavy consumption of alcoholic beverages has been associated with an increased risk of cancer. Ingestion of ethanol during pregnancy can cause human birth defects such as fetal alcohol syndrome. This product contains butane. An atmospheric concentration of 100,000 ppm (10%) butane is not noticeably irritating to the eyes, nose or respiratory tract, but will produce slight dizziness in a few minutes of exposure. No chronic systemic effect has been reported from occupational exposure.

This product contains benzene.

**GENETIC TOXICITY/CANCER:** Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.

**REPRODUCTIVE/DEVELOPMENTAL TOXICITY:** No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta.

OCCUPATIONAL: The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

This product contains n-hexane.

TARGET ORGAN TOXICITY: Prolonged or repeated ingestion, skin contact or breathing of vapors of n-hexane has been shown to cause peripheral neuropathy. Recovery ranges from no recovery to complete recovery depending upon the severity of the nerve damage. Exposure to 1000 ppm n-hexane for 18 hr/day for 61 days has been shown to cause testicular damage in rats. However, when rats were exposed to higher concentrations for shorter daily periods (10,000 ppm for 6 h/day, 5 days/wk for 13 weeks), no testicular lesions were seen.

CARCINOGENICITY: Chronic exposure to commercial hexane (52% n-hexane) at a concentration of 9000ppm was not carcinogenic to rats or to male mice, but did result in an increased incidence of liver tumors in female mice. No carcinogenic effects were observed in female mice exposed to 900 or 3000 ppm hexane or in male mice. The relevance for humans of these hexane-induced mouse liver tumors is questionable.

GENETIC TOXICITY: n-Hexane caused chromosome aberrations in bone marrow of rats, but was negative in the AMES and mouse lymphoma tests.

## SECTION 12 ECOLOGICAL INFORMATION

### ECOTOXICITY

This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

48 hour(s) LC50: 3.0 mg/l (Daphnia magna)  
96 hour(s) LC50: 1.8 mg/l (Mysidopsis bahia)  
96 hour(s) LC50: 8.3 mg/l (Cyprinodon variegatus)  
96 hour(s) LC50: 2.7 mg/l (Oncorhynchus mykiss)

### MOBILITY

No data available.

### PERSISTENCE AND DEGRADABILITY

This material is expected to be readily biodegradable. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline

constituents also available.

**POTENTIAL TO BIOACCUMULATE**

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: 2 - 7

**SECTION 13 DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations. Check governmental regulations and local authorities for approved disposal of this material.

**SECTION 14 TRANSPORT INFORMATION**

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** UN1203, GASOLINE, 3, II; **OPTIONAL DISCLOSURE:** UN1203, GASOLINE, 3, II, MARINE POLLUTANT (GASOLINE)

**IMO/IMDG Shipping Description:** UN1203, GASOLINE, 3, II, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (GASOLINE)

**ICAO/IATA Shipping Description:** UN1203, GASOLINE, 3, II

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:**  
Not applicable

**SECTION 15 REGULATORY INFORMATION**

<b>EPCRA 311/312 CATEGORIES:</b>	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	YES
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:



01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Cyclohexane	05, 06, 07
Heptane	05, 06, 07
Methylcyclohexane	05, 06, 07
Pentane, 2,2,4-trimethyl- (Isooctane)	05, 06, 07
Naphthalene	01-2B, 02, 04, 05, 06, 07
Butane	05, 06, 07
Ethanol	01-1, 02, 04, 05, 06, 07
Gasoline	01-2B, 07
Ethyl benzene	01-2B, 03, 04, 05, 06, 07
Toluene (methylbenzene)	04, 05, 06, 07
Benzene	01-1, 02, 03, 04, 05, 06, 07
Hexane	05, 06, 07
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	03, 05, 06, 07

**CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):**

Component	Component RQ	Component TPQ	Product RQ
Benzene	10 lbs	None	186 lbs
Cyclohexane	1000 lbs	None	34188 lbs
Ethyl benzene	1000 lbs	None	34964 lbs
Hexane	5000 lbs	None	129149 lbs
Naphthalene	100 lbs	None	4000 lbs
Pentane, 2,2,4-trimethyl- (Isooctane)	1000 lbs	None	6270 lbs
Toluene (methylbenzene)	1000 lbs	None	2627 lbs
Xylene (contains o-, m-, & p- xylene isomers in varying amounts)	100 lbs	None	649 lbs

**CHEMICAL INVENTORIES:**

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

**SECTION 16 OTHER INFORMATION**

**NFPA RATINGS:** Health: 1 Flammability: 3 Reactivity: 0

**HMIS RATINGS:** Health: 2\* Flammability: 3 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**Additional Product Number(s):** 201003, 201004, 201006, 201007, 201008, 201010, 201011, 201018, 201021, 201025, 201031, 201032, 201033, 201034, 201036, 201037, 201038, 201041, 201043, 201046, 201048, 201064, 201208, 201210, 201211, 201212, 201230, 201231, 201232, 201260, 201261, 201262, 201271, 201272, 201273, 201280, 201281, 201282, 201288, 201290, 201291, 201292, 201851, 201852, 201858, 201859, 201860, 204004, 204005, 204012, 204013, 204024, 204025, 204048, 204049, 204072, 204073, 204090, 204091, 204106, 204107, 204118, 204119, 204142, 204143, 204166, 204167, 204190, 204191, 204202, 204203, 204209, 204214, 204215, 204226, 204227, 204250, 204251, 204274, 204275, 204292, 204293, 204325, 204326, 204360, 204361, 204366, 204367, 204372, 204373, 204378, 204379, 204384, 204385, 204390, 204391, 204396, 204397, 204402, 204403, 204408, 204409, 204414, 204415, 204420, 204421, 204426, 204427, 204432, 204433, 204438, 204439, 204468, 204469, 204486, 204487, 204504, 204505, 204522, 204523, 204540, 204541, 204558, 204559, 204576, 204577, 204594, 204595, 204612, 204613, 204630, 204631, 204648, 204649, 204666, 204667, 204692, 204693, 204698, 204699, 204704, 204705, 204710, 204711, 204723, 204724, 204729, 204730

**REVISION STATEMENT:**

- SECTION 01 - Product Code(s) information was modified.
- SECTION 05 - Extinguishing Media information was modified.
- SECTION 08 - Occupational Exposure Limit Table information was modified.
- SECTION 16 - HMIS Rating information was modified.
- SECTION 16 - NFPA Rating information was modified.

**Revision Date:** October 04, 2016

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)

IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583.

**The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.**



# Safety Data Sheet



**SECTION 1 PRODUCT AND COMPANY IDENTIFICATION**

## Chevron Heavy Duty PF Green Antifreeze/Coolant - Premixed 50/50

**Product Use:** Antifreeze/Coolant

**Product Number(s):** 275113

**Company Identification**

Chevron Products Company  
a division of Chevron U.S.A. Inc.  
6001 Bollinger Canyon Rd.  
San Ramon, CA 94583  
United States of America  
www.chevronlubricants.com

**Transportation Emergency Response**

CHEMTREC: (800) 424-9300 or (703) 527-3887

**Health Emergency**

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

**Product Information**

email : lubemsds@chevron.com  
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

**SECTION 2 HAZARDS IDENTIFICATION**

**CLASSIFICATION:** Target organ toxicant (repeated exposure): Category 2.



**Signal Word:** Warning

**Target Organs:** May cause damage to organs (Kidney) through prolonged or repeated exposure.

**PRECAUTIONARY STATEMENTS:**

**Prevention:** Do not breathe dust/fume/gas/mist/vapours/spray.

**Response:** Get medical advice/attention if you feel unwell.

**Disposal:** Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**HAZARDS NOT OTHERWISE CLASSIFIED:** Not Applicable

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene Glycol	107-21-1	40 - 60 %wt/wt
Sodium tetraborate, pentahydrate	12179-04-3	0.1 - < 1 %wt/wt

**SECTION 4 FIRST AID MEASURES**

**Description of first aid measures**

**Eye:** No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:** No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

**Inhalation:** Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

**Most important symptoms and effects, both acute and delayed**

**IMMEDIATE HEALTH EFFECTS**

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

**Ingestion:** Toxic; may be harmful or fatal if swallowed.

**Inhalation:** Breathing this material at concentrations above the recommended exposure limits may cause

central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the eye and upper respiratory tract.

**DELAYED OR OTHER HEALTH EFFECTS:**

**Target Organs:** Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit: Kidney Risk depends on duration and level of exposure. See Section 11 for additional information.

**Indication of any immediate medical attention and special treatment needed** Not Applicable

**SECTION 5 FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames. Dry Chemical, CO2, AFFF Foam or alcohol resistant foam.

**PROTECTION OF FIRE FIGHTERS:**

**Fire Fighting Instructions:** This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

**SECTION 7 HANDLING AND STORAGE**

**General Handling Information:** Do not taste or swallow antifreeze or solution. Keep out of the reach of children and animals.

**Precautionary Measures:** Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not

breathe vapor or fumes from heated material. Do not breathe vapor or fumes. Keep out of the reach of children.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

**General Storage Information:** Do not store in open or unlabeled containers.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

**GENERAL CONSIDERATIONS:**

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**ENGINEERING CONTROLS:**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Natural rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride (PVC or Vinyl).

**Respiratory Protection:** Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not

provide adequate protection.

**Occupational Exposure Limits:**

Component	Agency	TWA	STEL	Ceiling	Notation
Ethylene Glycol	ACGIH	--	--	100 mg/m3	--
Sodium tetraborate, pentahydrate	ACGIH	2 mg/m3	6 mg/m3	--	--

Consult local authorities for appropriate values.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**Attention: the data below are typical values and do not constitute a specification.**

**Color:** Green

**Physical State:** Liquid

**Odor:** Faint or Mild

**Odor Threshold:** No data available

**pH:** No data available

**Vapor Pressure:** 0.12 mmHg (Typical) @ 20 °C (68 °F)

**Vapor Density (Air = 1):** 2.10

**Initial Boiling Point:** 108.9°C (228°F)

**Solubility:** Soluble in water.

**Freezing Point:** -34°C (-29.2°F)

**Specific Gravity:** 1.08 @ 15.6°C (60.1°F)

**Density:** No data available

**Viscosity:** No data available

**Evaporation Rate:** No data available

**Decomposition temperature:** No data available

**Octanol/Water Partition Coefficient:** No data available

**FLAMMABLE PROPERTIES:**

**Flammability (solid, gas):** No Data Available

**Flashpoint:** Not Applicable

**Autoignition:** No data available

**Flammability (Explosive) Limits (% by volume in air):** Lower: No data available Upper: No data available

**SECTION 10 STABILITY AND REACTIVITY**

**Reactivity:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility With Other Materials:** Not applicable

**Hazardous Decomposition Products:** Aldehydes (Elevated temperatures), Ketones (Elevated temperatures)

**Hazardous Polymerization:** Hazardous polymerization will not occur.

<b>SECTION 11 TOXICOLOGICAL INFORMATION</b>
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**Information on toxicological effects**

**Serious Eye Damage/Irritation:** The eye irritation hazard is based on evaluation of data for product components.

**Skin Corrosion/Irritation:** The skin irritation hazard is based on evaluation of data for product components.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for product components.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for product components.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for product components.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for product components.

**Acute Toxicity Estimate:** Not Determined

**Germ Cell Mutagenicity:** The hazard evaluation is based on data for components or a similar material.

**Carcinogenicity:** The hazard evaluation is based on data for components or a similar material.

**Reproductive Toxicity:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Single Exposure:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Repeated Exposure:** The hazard evaluation is based on data for components or a similar material.

**ADDITIONAL TOXICOLOGY INFORMATION:**

This product contains diethylene glycol (DEG). The estimated oral lethal dose is about 50 cc (1.6 oz) for an adult human. DEG has caused the following effects in laboratory animals: liver abnormalities, kidney damage and blood abnormalities. It has been suggested as a cause of the following effects in humans: liver abnormalities, kidney damage, lung damage and central nervous system damage.

This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human.



Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.

**SECTION 12 ECOLOGICAL INFORMATION**

**ECOTOXICITY**

This material is not expected to be harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

**MOBILITY**

No data available.

**PERSISTENCE AND DEGRADABILITY**

This material is expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material. The product has not been tested. The statement has been derived from the properties of the individual components.

**POTENTIAL TO BIOACCUMULATE**

Bioconcentration Factor: No data available.  
Octanol/Water Partition Coefficient: No data available

**SECTION 13 DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations.

**SECTION 14 TRANSPORT INFORMATION**

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** PROPRIETARY ANTIFREEZE PREPARATION IN NON-BULK PACKAGING; NOT REGULATED FOR TRANSPORT UNDER 49 CFR

**Additional Information:** Bulk shipments containing a reportable quantity (RQ, 5000 pounds or more) of ethylene glycol in a single packaging are transported as hazardous material. The shipping description is: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ETHYLENE GLYCOL CONTAINS BITTERANT), 9, III, RQ (ETHYLENE GLYCOL)

**IMO/IMDG Shipping Description:** NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** Anti-freeze Preparations, Proprietary; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:**  
Not applicable

## SECTION 15 REGULATORY INFORMATION

<b>EPCRA 311/312 CATEGORIES:</b>	1. Immediate (Acute) Health Effects:	NO
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Ethylene Glycol	04, 05, 07
Sodium tetraborate, pentahydrate	05, 06, 07

### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).



One or more components does not comply with the following chemical inventory requirements: ENCS (Japan).

**NEW JERSEY RTK CLASSIFICATION:**

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: Refer to components listed in Section 3.

**SECTION 16 OTHER INFORMATION**

**NFPA RATINGS:** Health: 2 Flammability: 1 Reactivity: 0

**HMIS RATINGS:** Health: 2\* Flammability: 1 Reactivity: 0  
 (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**REVISION STATEMENT:** This revision updates the following sections of this Safety Data Sheet: 15, 16

**Revision Date:** June 08, 2016

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road San Ramon, CA 94583.

The above information is based on the data of which we are aware and is believed to be correct as of

the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

# MATERIAL SAFETY DATA SHEET

## *Vance Brothers, Inc.*

5201 Brighton, P.O. Box 300107  
 Kansas City, MO 64130  
 Phone: 816-923-4325/ 800-821-8549 FAX: 816-923-6472  
 Emergency Phone Number (CHEMTREC): 800-424-9300

HMIS HAZARD RATING	
1	HEALTH
0	FIRE
0	REACTIVITY

### I. PRODUCT INFORMATION

TRADE NAME <b>CRS-1H &amp; CRS-2 ASPHALT EMULSION</b>	C.A.S. NUMBER <b>Mixture</b>
SYNONYMS <b>Chip Seal Oil, Crackfiller</b>	PRODUCT CODE NUMBER <b>407, 411</b>

### II. PHYSICAL DATA

BOILING POINT @ 760 MM Hg <b>212°F</b>	% VOLATILES BY VOLUME <b>30-35%</b>	SOLUBILITY IN H2O BY WEIGHT % <b>Miscible</b>
SPECIFIC GRAVITY <b>1.0 ± 0.2 @ 60°F</b>	MELTING POINT <b>Not Applicable</b>	EVAPORATION RATE (BUTYL ACETATE = 1) <b>Slower</b>
VAPOR DENSITY (AIR = 1) <b>&gt;1.0</b>	VAPOR PRESSURE <b>Not Determined</b>	APPEARANCE AND ODOR <b>Brown to Black Material--Sweet Odor</b>

### III. HAZARDOUS COMPONENTS

C.A.S. NUMBER	MATERIAL OR COMPONENT	%	HAZARD DATA
<b>8052-42-4</b>	<b>[1] Asphalt</b>	<b>65-70</b>	TLV/TWA - 5mg/m <sup>3</sup> for asphalt fumes TLV/STEL - 10 mg/m <sup>3</sup> for asphalt fumes
<b>7732-18-5</b>	<b>[2] Water</b>	<b>30-35</b>	<b>Not applicable</b>

#### IV. HEALTH HAZARD INFORMATION

<b>EXPOSURE LIMITS</b>	TLV/TWA <b>5 mg/m<sup>3</sup> for oil mist</b>	TLV/STEL <b>5 mg/m<sup>3</sup> for oil mist</b>	TLV/PEL <b>Not Established</b>	ODOR THRESHOLD LIMIT <b>Not Applicable</b>
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#### ROUTES OF EXPOSURE AND EFFECTS AS REQUIRED BY 29CFR1910.1200

<b>INHALATION</b>	<p><b>Vapors which are released during the curing process are not known to contain hazardous materials. However, effects from raw materials include irritation to the eye, nose, and respiratory tracts of test animals. Health effects are not be expected if proper personal safety and hygiene is observed.</b></p>
<b>INGESTION</b>	<p><b>High viscosity oils, i.e. asphalt, have been shown to be less toxic when ingested than lower viscosity, higher volatility oils. Product contains acidic material (0.4%) and could cause burns in the mouth, esophagus, and stomach.</b></p>
<b>SKIN ABSORPTION exposed</b>	<p><b>Skin absorption could occur through normal skin contact and/or through wounds to asphalt products. Product contains less than 0.4% acidic material. Effects could include irritation and possible tissue damage or dermatitis. Health effects are not be expected if proper personal safety and hygiene is observed.</b></p>
<b>SKIN CONTACT</b>	<p><b>Product contains less than 0.4% acidic material. Direct contact may cause irritation and/or itching. Pre-existing skin disorders may be aggravated by exposure to this product. Severe effects could include tissue burns, irritation and dermatitis.</b></p>
<b>EYE CONTACT</b>	<p><b>Documentation indicates that contact lenses should not be worn when exposed to this product. This product contains less than 0.4% acidic material and can cause inflammation, irritation, and possible corneal burns.</b></p>
<b>ACUTE OVEREXPOSURE</b>	<p><b>Skin effects may include irritation and itching. Product contains less than 0.4% acidic material and may cause tissue burns or dermatitis. Any pre-existing skin conditions may be aggravated by exposure to this product.</b></p>
<b>CHRONIC OVEREXPOSURE observed. exposure to this</b>	<p><b>Chronic health effects are not expected if proper personal safety and hygiene is observed. Pre-existing skin disorders may be aggravated by repeated or prolonged exposure to this product.</b></p>

#### V. EMERGENCY AND FIRST AID PROCEDURES

<b>INHALATION</b>	<p><b>Vapors that are released during the curing process are not known to contain hazardous materials. However, if breathing is difficult, move person to fresh air and seek prompt medical attention.</b></p>
<b>INGESTION</b>	<p><b>DO NOT induce vomiting. In general, emesis induction is unnecessary for high viscosity, low volatility oils such as asphalt and grease. Avoid all digestible oils, fats, and alcohol which may increase intestinal absorption. Seek medical attention.</b></p>
<b>SKIN CONTACT</b>	<p><b>Flush area with water to cool. Wash affected area with waterless hand cleaner, followed by water and a mild detergent. DO NOT use solvents! For relief from irritation, apply hand lotion. If irritation persists, seek medical attention.</b></p>
<b>EYE CONTACT</b>	<p><b>Flush eyes with water for 15 minutes while holding eyelids open. If subject is wearing contact lenses, immediately seek an ophthalmologist for treatment.</b></p>

## VI. SPECIAL PROTECTION INFORMATION

VENTILATION	<b>Care must be taken to assure that the TLV/TWA of 5mg/m<sup>3</sup> for oil mist is not exceeded. Normal exterior application should not require the need for mechanical ventilation. Application must be made downwind from operator.</b>	<b>PERSONAL PROTECTIVE EQUIPMENT</b>
RESPIRATORY PROTECTION	<b>If needed, use an approved OSHA/NIOSH particulate and organic vapor canister respirator, or a positive atmosphere supplied air respirator as described in 29 CFR 1910.134.</b>	<b>DUST/ORGANIC VAPOR RESPIRATOR</b>
EYE PROTECTION <b>handling</b>	<b>Goggles and full-face shield are recommended when this material.</b>	<b>GOGGLES FULL-FACE SHIELD</b>
SKIN PROTECTION	<b>Flannel-lined Neoprene or Nitrile gloves are recommended.</b>	<b>CHEMICAL RESISTANT GLOVES</b>
OTHER PPE	<b>Rubber or leather footwear is recommended. All clothing saturated with this product should be discarded.</b>	<b>BOOTS</b>

## VII. FIRE AND EXPLOSION DATA

FLASH POINT <b>Not Applicable</b>	AUTOIGNITION TEMPERATURE <b>Not Applicable</b>	LOWER FLAMMABLE LIMIT <b>Unknown</b>
EXTINGUISHING MEDIA <b>This product contains water and will not burn until all moisture has been removed. If fire should occur, extinguish with foam, carbon dioxide or dry chemical extinguishers.</b>		
SPECIAL FIRE FIGHTING PROCEDURES <b>Fire fighters should wear full protective equipment and self-contained breathing apparatus.</b>		
UNUSUAL FIRE AND EXPLOSION HAZARDS <b>Water sprayed on burning product may cause frothing, steam, and eruptions.</b>		

## VIII. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY <b>Since this is a water-based emulsion, settling will occur. The settling rate is dependent on the dilution and storage temperature. NOTE: Care should be taken to prevent this material from freezing.</b>
INCOMPATIBILITY <b>This material is incompatible with bases. DO NOT heat above 212°F. All additives should be evaluated before use in the field.</b>
HAZARDOUS DECOMPOSITION PRODUCTS <b>Irritating or toxic vapors may be released when this material is burned.</b>
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION <b>None known.</b>

## IX. SPILL AND LEAK PROCEDURES

### SPILL CONTROL PROCEDURE

**If possible, stop source of leak. Dike and contain to eliminate environmental contamination. For small spills, squeegee into thin layer and cover with dirt or aggregate. If material enters a waterway, notify police, local EPA and the National Response Center (1-800-424-8802).**

### NEUTRALIZING CHEMICALS

**DO NOT use water. This material is highly miscible and water will increase the volume of the spill. If appropriate, pump material into holding vessel and bind with sand or lime dust.**

### WASTE DISPOSAL

**If disposal is necessary, contact your state environmental agency for guidance with disposal methods and waste receiving locations in your area.**

## X. SPECIAL PRECAUTIONS

**ENVIRONMENTAL**

1. This product is considered oil under EPA-CWA Section 311. Spills into water sources must be reported to 1-800-424-8802.
2. If this product becomes a waste material, refer to 40 CFR 261.21 (RCRA) for latest waste disposal regulations and waste stream number.
3. This product is listed in the EPA/TSCA inventory (40 CFR 700 to end).

**LABELING**

1. "KEEP FROM FREEZING" labels are recommended.
2. This material is not regulated by the Department of Transportation.

## XI. REFERENCES

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. BITUMEN SAFETY CODE (ISBN-085501-319-2)</li> <li>2. CAUSTIC SODA HANDBOOK, VULCAN CHEMICAL</li> <li>3. CLINICAL TOXICOLOGY OF COMMERCIAL PRODUCTS, 5TH EDITION</li> <li>4. DOCUMENTATION OF THRESHOLD LIMIT VALUES, 4TH EDITION</li> <li>5. ENCYCLOPEDIA OF SURFACTANTS, VOLUME III</li> <li>6. EPA/CWA SECTION 311</li> </ol> | <ol style="list-style-type: none"> <li>7. HYGIENE AND SANITATION, VOLUME 33</li> <li>8. NFPA 325M, 704</li> <li>9. POISONING, TOXICOLOGY, SYMPTOMS, TREATMENTS</li> <li>10. 29 CFR, 40 CFR AS NOTED WITHIN</li> <li>11. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES</li> </ol> |
|--|---|

*NOTE: This material safety data sheet is intended as a source of information for persons involved in any and all phases of handling this material, from production to final application, as required by 29 CFR 1910.1200. The health data provided is based on the nature of the raw constituents. This material is a mixture and the health effects as such have not been evaluated.*

## XII. ENVIRONMENTAL INFORMATION

<p>1. THIS PRODUCT CONTAINS THE FOLLOWING EXTREMELY HAZARDOUS SUBSTANCE(S) (SECTION 302 AND 304):</p> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">COMPONENT</th> <th style="text-align: left;">TPQ(LBS)</th> <th style="text-align: left;">RQ(BLS)</th> </tr> <tr> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </table> <p>FOLLOWING CERCLA HAZARDOUS SUBSTANCE(S) (SECTION 302 AND 304):</p> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">COMPONENT</th> <th style="text-align: left;">RQ(LBS)</th> <th style="text-align: left;">WEIGHT %</th> </tr> <tr> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </table> <p>3. THIS PRODUCT HAS THE FOLLOWING HAZARDS (SECTION 311 AND 312):</p> <table border="0" style="width: 100%;"> <tr> <td></td> <td style="text-align: center;"><u>YES</u></td> <td style="text-align: center;"><u>NO</u></td> </tr> <tr> <td>IMMEDIATE</td> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td>DELAYED</td> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td>FIRE</td> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td>PRESSURE</td> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> <tr> <td>REACTIVITY</td> <td style="text-align: center;">X</td> <td style="text-align: center;"></td> </tr> </table>	COMPONENT	TPQ(LBS)	RQ(BLS)	N/A	N/A	N/A	COMPONENT	RQ(LBS)	WEIGHT %	N/A	N/A	N/A		<u>YES</u>	<u>NO</u>	IMMEDIATE	X		DELAYED	X		FIRE	X		PRESSURE	X		REACTIVITY	X		<p>4. THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS (SECTION 313):</p> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">COMPONENT</th> <th style="text-align: left;">CAS#</th> <th style="text-align: left;">WEIGHT %</th> </tr> <tr> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </table> <p>2. THIS PRODUCT CONTAINS THE</p> <p>CARCINOGENICITY: <u>NTP</u>    <u>IARC MONOGRAPHS</u>    <u>OSHA</u></p> <p style="margin-left: 100px;">NO                      NO                      NO</p>	COMPONENT	CAS#	WEIGHT %	N/A	N/A	N/A
COMPONENT	TPQ(LBS)	RQ(BLS)																																			
N/A	N/A	N/A																																			
COMPONENT	RQ(LBS)	WEIGHT %																																			
N/A	N/A	N/A																																			
	<u>YES</u>	<u>NO</u>																																			
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DELAYED	X																																				
FIRE	X																																				
PRESSURE	X																																				
REACTIVITY	X																																				
COMPONENT	CAS#	WEIGHT %																																			
N/A	N/A	N/A																																			

*The information provided in this material safety data sheet has been obtained and compiled from sources believed to be reliable. This information relates to the specific material designated and may not be valid for such material used in combination with any other material or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. Vance Brothers, Inc. does not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent.*

### **VANCE BROTHERS, INC.**

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 3313 MOLINE STREET, AURORA, CO 80010 (303) 341-2604  
 4908 N BRYANT, OKLAHOMA CITY, OK 73121 (405) 427-1389  
 9306 E. 11<sup>TH</sup>, SUITE A, TULSA, OK 74112 (918) 838-2533  
 14021 AZURITE ST NW, RAMSEY, MN 55303 (612) 421-4034

### DATE

January 15, 2007

### PREPARED BY

Stan Fronckewicz

# Safety Data Sheet



**SECTION 1 PRODUCT AND COMPANY IDENTIFICATION**

## DIESEL FUEL No. 2

**Product Use:** Fuel [See Section 16 for Additional Product Numbers]

**Synonyms:** 15 S Diesel Fuel 2; Alternative Low Aromatic Diesel (ALAD); CAL ULS S R6-20 B0-5 DF2; CAL ULS S R6-20 B0-5 DF2DY; Calco LS Diesel 2; CALCO ULS C-B0-B5 DF2; CALCO ULS C-B0-B5 DF2 DYED; CALCO ULS C-B2 DF2; CALCO ULS C-B2 DF2 DYED; CALCO ULS C-B5 DF2; CALCO ULS C-B5 DF2 DYED; Calco ULS DF2; Calco ULS Diesel 2; CALCO ULS S R6-20 DF2; CALCO ULS S R6-20 DF2 DYED; CALCO ULS S-B0-B5 DF2 DYED; Calco ULS S-B5 DF2; Calco ULS S-B5 DF2 DYED; CALCO ULS TC-B1 DF2; CALCO ULS TC-B1 DF2 DYED; CALCO ULS TC-B2 DF2; CALCO ULS TC-B2 DF2 DYED; CALCO ULS TC-B3 DF2; CALCO ULS TC-B3 DF2 DYED; CALCO ULS TC-B4 DF2; CALCO ULS TC-B4 DF2 DYED; CALCO ULS TC-B5 DF2; CALCO ULS TC-B5 DF2 DYED; CALCO ULS TX-B1 DF2; CALCO ULS TX-B1 DF2 DYED; CALCO ULS TX-B2 DF2; CALCO ULS TX-B2 DF2 DYED; CALCO ULS TX-B3 DF2; CALCO ULS TX-B3 DF2 DYED; CALCO ULS TX-B4 DF2; CALCO ULS TX-B4 DF2 DYED; CALCO ULS TX-B5 DF2; CALCO ULS TX-B5 DF2 DYED; Chevron LS Diesel 2; Chevron ULS Diesel 2; CT ULS C-B0-B5 DF2; CT ULS C-B0-B5 DF2 DYED; CT ULS C-B2 DF2; CT ULS C-B5 DF2; CT ULS S R6-20 B0-5 DF2; CT ULS S R6-20 DF2; CT ULS S R6-20 DF2 DYED; CT ULS S-B0-B5 DF2 DYED; CT ULS S-B5 DF2; CT ULS S-B5 DF2 DYED; CT ULS S-BO-B5 DF2; CT ULS SPECIAL DF2 DYED; CT ULS TC-B1 DF2; CT ULS TC-B2 DF2; CT ULS TC-B3 DF2; CT ULS TC-B4 DF2; CT ULS TC-B5 DF2; CT ULS TX-B1 DF2; CT ULS TX-B2 DF2; CT ULS TX-B3 DF2; CT ULS TX-B4 DF2; CT ULS TX-B5 DF2; Diesel Fuel Oil; Diesel Grade No. 2; Diesel No. 2-D S15; Diesel No. 2-D S500; Diesel No. 2-D S5000; Distillates, straight run; Gas Oil; HS Diesel 2; HS Heating Fuel 2; Light Diesel Oil Grade No. 2-D; LS Diesel 2; LS Heating Fuel 2; Marine Diesel; RR Diesel Fuel; Texaco Diesel; Texaco Diesel No. 2; ULS C-B0-B5 DF2; ULS C-B0-B5 DF2 DYED; ULS C-B2 DF2; ULS C-B2 DF2 DYED; ULS C-B5 DF2; ULS C-B5 DF2 DYED; ULS S R6-20 B0-5 DF2; ULS S R6-20 B0-5 DF2 DYED; ULS S R6-20 DF2; ULS S R6-20 DF2 DYED; ULS S-B0-B5 DF2 DYED; ULS S-B5 DF2; ULS S-BO-B5 DF2; ULS TC-B1 DF2; ULS TC-B1 DF2 DYED; ULS TC-B2 DF2; ULS TC-B2 DF2 DYED; ULS TC-B3 DF2; ULS TC-B3 DF2 DYED; ULS TC-B4 DF2; ULS TC-B4 DF2 DYED; ULS TC-B5 DF2; ULS TC-B5 DF2 DYED; ULS TX-B1 DF2; ULS TX-B1 DF2 DYED; ULS TX-B3 DF2; ULS TX-B3 DF2 DYED; ULS TX-B4 DF2; ULS TX-B4 DF2 DYED; ULS TX-B5 DF2; ULS TX-B5 DF2 DYED; Ultra Low Sulfur Diesel 2

**Company Identification**

Chevron Products Company  
6001 Bollinger Canyon Rd.  
San Ramon, CA 94583  
United States of America

### Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

### Health Emergency

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

### Product Information

Product Information: (800) 582-3835

SDS Requests: lubemsds@chevron.com

SPECIAL NOTES: This SDS covers all Chevron, Texaco and Calco CARB & non-CARB Diesel No. 2 Fuels. The sulfur content is less than 0.5% (mass). Red dye is added to non-taxable fuel. (SDS 6894)

SPECIAL NOTES: This SDS covers all Chevron and Calco CARB Low Sulfur Diesel No. 2 Fuels. Red dye is added to non-taxable fuel. (SDS 7098)

## SECTION 2 HAZARDS IDENTIFICATION

**CLASSIFICATION:** Flammable liquid: Category 3. Aspiration toxicant: Category 1. Carcinogen: Category 1B. Skin irritation: Category 2. Target organ toxicant (repeated exposure): Category 2. Target organ toxicant (central nervous system): Category 3. Acute inhalation toxicant: Category 4. Acute aquatic toxicant: Category 2. Chronic aquatic toxicant: Category 2.



**Signal Word:** Danger

**Physical Hazards:** Flammable liquid and vapor.

**Health Hazards:** May be fatal if swallowed and enters airways. May cause cancer. Causes skin irritation. Harmful if inhaled. May cause drowsiness or dizziness.

**Target Organs:** May cause damage to organs (Blood/Blood Forming Organs, Liver, Thymus) through prolonged or repeated exposure.

**Environmental Hazards:** Toxic to aquatic life with long lasting effects.

### PRECAUTIONARY STATEMENTS:

**General:** Keep out of reach of children. Read label before use.

**Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. -- No smoking.



Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Wash thoroughly after handling. Avoid release to the environment.

**Response:** IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting. Call a poison center or doctor/physician if you feel unwell. In case of fire: Use media specified in the SDS to extinguish. Specific treatment (see Notes to Physician on this label). Collect spillage.

**Storage:** Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

**Disposal:** Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**HAZARDS NOT OTHERWISE CLASSIFIED:** Not Applicable

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NUMBER	AMOUNT
Diesel Fuel No. 2	68476-34-6	95 - 100 %vol/vol
Renewable Diesel	Mixture	0 - 20 %vol/vol
Fatty Acid Methyl Esters (FAME)	Mixture	0 - 5 %vol/vol
Naphthalene	91-20-3	0.02 - 0.2 %vol/vol
Total sulfur	Mixture	0 - 5000 ppm (weight)

**SECTION 4 FIRST AID MEASURES**

**Description of first aid measures**

**Eye:** No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:** Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

**Inhalation:** Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

**Most important symptoms and effects, both acute and delayed**

**IMMEDIATE HEALTH EFFECTS**

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Contact with the skin causes irritation. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.

**Ingestion:** Highly toxic; may be fatal if swallowed. Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

**Inhalation:** The vapor or fumes from this material may cause respiratory irritation. Mists of this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

**DELAYED OR OTHER HEALTH EFFECTS:**

**Cancer:** Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Prolonged or repeated exposure to this material may cause cancer. Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

**Target Organs:** Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit based on animal data: Liver  
Blood/Blood Forming Organs Thymus Risk depends on duration and level of exposure. See Section 11 for additional information.

**Indication of any immediate medical attention and special treatment needed**

**Note to Physicians:** Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

**SECTION 5 FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

**Unusual Fire Hazards:** See Section 7 for proper handling and storage.

**PROTECTION OF FIRE FIGHTERS:**

**Fire Fighting Instructions:** For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.



## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Protective Measures:** Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Precautionary Measures:** Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive force. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches.

Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Do not breathe mist. Wash thoroughly after handling. Keep out of the reach of children.

**Unusual Handling Hazards:** WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death. Slow heat generation may occur with oil-soaked rags, spent filter aids and spent absorbent material and may cause spontaneous combustion if stored near combustibles and not handled properly. Store biodiesel soaked rags, filter aids, and spill absorbent material in approved safety disposal containers and dispose of properly. Biodiesel soaked rags may be washed with soap and water and allowed to dry in well ventilated area.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

**General Storage Information:** DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

**GENERAL CONSIDERATIONS:**

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**ENGINEERING CONTROLS:**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted.

Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.

**Respiratory Protection:** Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.

When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Occupational Exposure Limits:**

Component	Agency	TWA	STEL	Ceiling	Notation
Total sulfur	Not Applicable	--	--	--	--
Diesel Fuel No. 2	ACGIH	100 mg/m3	--	--	Skin A3 total hydrocarbon
Diesel Fuel No. 2	CVX	100 mg/m3	--	--	Skin total hydrocarbon

Renewable Diesel	Not Applicable	--	--	--	--
Fatty Acid Methyl Esters (FAME)	Not Applicable	--	--	--	--
Naphthalene	ACGIH	10 ppm (weight)	15 ppm	--	Skin A3
Naphthalene	OSHA Z-1	50 mg/m3	--	--	--

Consult local authorities for appropriate values.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Attention: the data below are typical values and do not constitute a specification.**

**Color:** Varies depending on specification

**Physical State:** Liquid

**Odor:** Petroleum odor

**Odor Threshold:** No data available

**pH:** Not Applicable

**Vapor Pressure:** 0.04 kPa (Approximate) @ 40 °C (104 °F)

**Vapor Density (Air = 1):** >1

**Initial Boiling Point:** 175.6°C (348.1°F) - 370°C (698°F)

**Solubility:** Soluble in hydrocarbons; insoluble in water

**Freezing Point:** Not Applicable

**Melting Point:** Not Applicable

**Specific Gravity:** 0.80 - 0.88 @ 15.6°C (60.1°F) (Typical)

**Density:** No data available

**Viscosity:** 1.90 cSt - 4.10 cSt @ 40°C (104°F)

**Coefficient of Therm. Expansion / °F:** No data available

**Evaporation Rate:** No data available

**Decomposition temperature:** No data available

**Octanol/Water Partition Coefficient:** No data available

### FLAMMABLE PROPERTIES:

**Flammability (solid, gas):** No Data Available

**Flashpoint:** (Pensky-Martens Closed Cup) 52 °C (125 °F) Minimum

**Autoignition:** 257 °C (494 °F)

**Flammability (Explosive) Limits (% by volume in air):** Lower: 0.6 Upper: 4.7

## SECTION 10 STABILITY AND REACTIVITY

**Reactivity:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Conditions to Avoid:** Avoid contact with heat, sparks, fire and oxidizing agents

**Incompatibility With Other Materials:** Not applicable

**Hazardous Decomposition Products:** None known (None expected)

**Hazardous Polymerization:** Hazardous polymerization will not occur.

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

**Serious Eye Damage/Irritation:** The eye irritation hazard is based on evaluation of data for similar materials.

**Skin Corrosion/Irritation:** The skin irritation hazard is based on evaluation of data for similar materials.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for similar materials.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for similar materials.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for similar materials.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials.

**Acute Toxicity Estimate (inhalation):** 1.2 mg/l

**Germ Cell Mutagenicity:** The hazard evaluation is based on data for components or a similar material.

**Carcinogenicity:** The hazard evaluation is based on data for components or a similar material. Whole diesel engine exhaust has been classified as a Group 2A carcinogen (probably carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

**Reproductive Toxicity:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Single Exposure:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Repeated Exposure:** The hazard evaluation is based on data for components or a similar material.

### ADDITIONAL TOXICOLOGY INFORMATION:

This product contains gas oils.

CONCAWE (product dossier 95/107) has summarized current health, safety and environmental data available for a number of gas oils, typically hydrodesulfurized middle distillates, CAS 64742-80-9, straight-run middle distillates, CAS 64741-44-2, and/or light cat-cracked distillate CAS 64741-59-9.

CARCINOGENICITY: All materials tested have caused the development of skin tumors in mice, but all

featured severe skin irritation and sometimes a long latency period before tumors developed. Straight-run and cracked gas oil samples were studied to determine the influence of dermal irritation on the carcinogenic activity of middle distillates. At non-irritant doses the straight-run gas oil was not carcinogenic, but at irritant doses, weak activity was demonstrated. Cracked gas oils, when diluted with mineral oil, demonstrated carcinogenic activity irrespective of the occurrence of skin irritation. Gas oils were tested on male mice to study tumor initiating/promoting activity. The results demonstrated that while a straight-run gas oil sample was neither an initiator or promotor, a blend of straight-run and FCC stock was both a tumor initiator and a promoter.

**GENOTOXICITY:** Hydrotreated & hydrodesulfurized gas oils range in activity from inactive to weakly positive in in-vitro bacterial mutagenicity assays. Mouse lymphoma assays on straight-run gas oils without subsequent hydrodesulphurization gave positive results in the presence of S9 metabolic activation. In-vivo bone marrow cytogenetics and sister chromatic exchange assay exhibited no activity for straight-run components with or without hydrodesulphurization. Thermally or catalytically cracked gas oils tested with in-vitro bacterial mutagenicity assays in the presence of S9 metabolic activation were shown to be mutagenic. In-vitro sister chromatic exchange assays on cracked gas oil gave equivocal results both with and without S9 metabolic activation. In-vivo bone marrow cytogenetics assay was inactive for two cracked gas oil samples. Three hydrocracked gas oils were tested with in-vitro bacterial mutagenicity assays with S9, and one of the three gave positive results. Twelve distillate fuel samples were tested with in-vitro bacterial mutagenicity assays & with S9 metabolic activation and showed negative to weakly positive results. In one series, activity was shown to be related to the PCA content of samples tested. Two in-vivo studies were also conducted. A mouse dominant lethal assay was negative for a sample of diesel fuel. In the other study, 9 samples of No 2 heating oil containing 50% cracked stocks caused a slight increase in the number of chromosomal aberrations in bone marrow cytogenetics assays. **DEVELOPMENTAL TOXICITY:** Diesel fuel vapor did not cause fetotoxic or teratogenic effects when pregnant rats were exposed on days 6-15 of pregnancy. Gas oils were applied to the skin of pregnant rats daily on days 0-19 of gestation. All but one (coker light gas oil) caused fetotoxicity (increased resorptions, reduced litter weight, reduced litter size) at dose levels that were also maternally toxic.

The National Institute of Occupational Safety and Health (NIOSH) has recommended that whole diesel exhaust be regarded as potentially causing cancer. This recommendation was based on test results showing increased lung cancer in laboratory animals exposed to whole diesel exhaust.

This product contains naphthalene.

**GENERAL TOXICITY:** Exposure to naphthalene has been reported to cause methemoglobinemia and/or hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.

**REPRODUCTIVE TOXICITY AND BIRTH DEFECTS:** Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. **GENETIC TOXICITY:** Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests. **CARCINOGENICITY:** In a study conducted by the National Toxicology Program (NTP), mice exposed to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the

male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

**SECTION 12 ECOLOGICAL INFORMATION**

**ECOTOXICITY**

A series of studies on the acute toxicity of 4 diesel fuel samples were conducted by one laboratory using water accommodated fractions. The range of effective (EC50) or lethal concentrations (LC50) expressed as loading rates were: This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

- 72 hour(s) EC50: 2.6-25 mg/l (Selenastrum capricornutum)
- 96 hour(s) LC50: 21-210 mg/l (Salmo gairdneri)
- 48 hour(s) EC50: 20-210 mg/l (Daphnia magna)

**MOBILITY**

No data available.

**PERSISTENCE AND DEGRADABILITY**

This material is not expected to be readily biodegradable. On release to the environment the lighter components of diesel fuel will generally evaporate but depending on local environmental conditions (temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Diesel fuel would not be expected to be readily biodegradable. In a modified Strum test (OECD method 301B) approximately 40% biodegradation was recorded over 28 days. However, it has been shown that most hydrocarbon components of diesel fuel are degraded in soil in the presence of oxygen. Under anaerobic conditions, such as in anoxic sediments, rates of biodegradation are negligible.

The product has not been tested. The statement has been derived from products of a similar structure and composition.

**POTENTIAL TO BIOACCUMULATE**

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

**SECTION 13 DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations.





## SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >= 23 deg C but <= 60 deg C: UN1202, GAS OIL, 3, III; OPTIONAL DISCLOSURE: UN1202, GAS OIL, 3, III, MARINE POLLUTANT (DIESEL FUEL) Optional disclosure per 49 CFR when Flash Point (PM Closed Cup) >= 38 deg C < 93 deg C per 49 173.150 (f): UN1202, GAS OIL, COMBUSTIBLE LIQUID, III; NON-BULK PACKAGES ARE EXEMPTED FROM THE PROVISIONS OF 49 CFR IN USA JURISDICTIONS Optional disclosure as a GHS Environmental Hazard/Marine Pollutant when Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

**IMO/IMDG Shipping Description:** For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >= 23 deg C, <= 60 deg C: UN1202, GAS OIL, 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (DIESEL FUEL); OPTIONAL DISCLOSURE: UN1268, PETROLEUM DISTILLATES, N.O.S. (DIESEL FUEL), 3, III, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (DIESEL FUEL) For packages with a Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

**ICAO/IATA Shipping Description:** For packages with an Initial Boiling Point > 35 deg C and a Flash Point (PM Closed Cup) >= 23 deg C, <= 60 deg C: UN1202, GAS OIL, 3, III For packages with a Flash Point (PM Closed Cup) > 60 deg C: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (DIESEL FUEL), 9, III, MARINE POLLUTANT (DIESEL FUEL)

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:**  
Not applicable

## SECTION 15 REGULATORY INFORMATION

<b>EPCRA 311/312 CATEGORIES:</b>	1. Immediate (Acute) Health Effects:	YES
	2. Delayed (Chronic) Health Effects:	YES
	3. Fire Hazard:	YES
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1

03=EPCRA 313

Revision Number: 27

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DIESEL FUEL No. 2

Revision Date: February 23, 2017

SDS : 6894

01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Diesel Fuel No. 2	07
Naphthalene	01-2B, 02, 04, 06

**CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):**

Component	Component RQ	Component TPQ	Product RQ
Naphthalene	100 lbs	None	40000 lbs

**CHEMICAL INVENTORIES:**

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), KECI (Korea), PICCS (Philippines), TCSI (Taiwan), TSCA (United States).

**NEW JERSEY RTK CLASSIFICATION:**

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: DIESEL FUEL

**SECTION 16 OTHER INFORMATION**

**NFPA RATINGS:** Health: 1 Flammability: 2 Reactivity: 0

**HMIS RATINGS:** Health: 2\* Flammability: 2 Reactivity: 0  
 (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**Additional Product Number(s):** 203408, 203410, 203413, 203417, 203431, 203436, 203437, 203441, 203443, 203447, 203449, 203450, 203477990, 203480990, 203481990, 203482990, 203483990, 203484990, 203485990, 203486990, 203487990, 203488990, 203489990, 220122, 225114, 225115, 225150, 266176, 270000, 270005, 270030, 270031, 270032, 270033, 270034, 270040, 270041, 270042, 270043, 270044, 270045, 270046, 270047, 270048, 270049, 270050, 270051, 270052, 270053, 270054, 270058, 270059, 270060, 270062, 270063, 270064, 270065, 270068, 270069, 270070, 270081, 270082, 270083, 270084, 270085, 270086, 270087, 270088, 270089, 270090, 270091, 270094, 270095, 270096, 270100, 270101, 270102, 270103, 270104, 270105, 270106, 270107, 270108, 270109, 270110, 270111,

270112, 270113, 270114, 270115, 270116, 270117, 270118, 270119, 270120, 270121, 270122, 270123, 270124, 271006, 272006, 272007, 272008, 272009, 272010, 272011, 272012, 272013, 272093, 272102, 272126, 272129, 272130, 272131, 272152, 272185, 272190, 272195, 272593, 272601, 272602, 272693, 272793, 273003, 273030, 273053, 275000

**REVISION STATEMENT:**

SECTION 15 - Regulatory Information information was modified.

SECTION 16 - Product Code(s) information was modified.

**Revision Date:** February 23, 2017

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.


**GOJO® NATURAL\* ORANGE™ Pumice Hand Cleaner**

Version 1.0

SDS Number: 400000005275

Revision Date: 11/17/2016

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : GOJO® NATURAL\* ORANGE™ Pumice Hand Cleaner

**Manufacturer or supplier's details**

Company name of supplier : GOJO Industries, Inc.

Address : One GOJO Plaza, Suite 500  
Akron, Ohio 44311

Telephone : 1 (330) 255-6000

Emergency telephone number : 1-800-424-9300 CHEMTREC

**Recommended use of the chemical and restrictions on use**

Recommended use : Skin-care

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

Prepared by :

**SECTION 2. HAZARDS IDENTIFICATION**
**Emergency Overview**

Physical state	liquid
Colour	grey, opaque
Odour	citrus

**GHS Classification**

Not a hazardous substance or mixture.

**GHS label elements**

Not a hazardous substance or mixture.


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**Potential Health Effects**

Primary Routes of Entry : Inhalation  
 Eye contact  
 Skin contact

Aggravated Medical Condition : None known.

**Carcinogenicity:**
**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**
**Hazardous components**

Chemical name	CAS-No.	Concentration (%)
C11-15 Alkane/cycloalkane	64742-47-8	>= 5 - < 10
Limonene	5989-27-5	>= 0.1 - < 1

**SECTION 4. FIRST AID MEASURES**

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
 When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
 If symptoms persist, call a physician.
- In case of skin contact : Wash with water and soap as a precaution.  
 Get medical attention if irritation develops and persists.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
 If easy to do, remove contact lens, if worn.  
 Seek medical advice.
- If swallowed : If swallowed, DO NOT induce vomiting.  
 Rinse mouth with water.  
 Obtain medical attention.
- Most important symptoms and effects, both acute and delayed : None known.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing

**SECTION 5. FIREFIGHTING MEASURES**


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- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : None known.
- Hazardous combustion products : Carbon oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
Evacuate personnel to safe areas.  
Material can create slippery conditions.
- Environmental precautions : Discharge into the environment must be avoided.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

**SECTION 7. HANDLING AND STORAGE**

- Advice on safe handling : For personal protection see section 8.  
Do not swallow.  
Avoid contact with eyes.  
Keep container closed when not in use.
- Conditions for safe storage : Keep in properly labelled containers.  
Keep container tightly closed in a dry and well-ventilated place.  
Store in accordance with the particular national regulations.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Components with workplace control parameters**

Components	CAS-No.	Value type	Control	Basis
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		(Form of exposure)	parameters / Permissible concentration	
C11-15 Alkane/cycloalkane	64742-47-8	TWA	200 mg/m <sup>3</sup> (As total hydrocarbon vapour)	CA BC OEL
		TWA	200 mg/m <sup>3</sup> (As total hydrocarbon vapour)	CA AB OEL
		TWA (Mist)	5 mg/m <sup>3</sup>	CA AB OEL
		STEL (Mist)	10 mg/m <sup>3</sup>	CA AB OEL
		TWAEV (Mist)	5 mg/m <sup>3</sup>	CA QC OEL
		STEV (Mist)	10 mg/m <sup>3</sup>	CA QC OEL
		TWA	525 mg/m <sup>3</sup>	CA ON OEL
		TWA	200 mg/m <sup>3</sup> (As total hydrocarbon vapour)	CA BC OEL
		TWA (Mist)	5 mg/m <sup>3</sup>	CA AB OEL
		STEL (Mist)	10 mg/m <sup>3</sup>	CA AB OEL
		TWAEV (Mist)	5 mg/m <sup>3</sup>	CA QC OEL
		STEV (Mist)	10 mg/m <sup>3</sup>	CA QC OEL
		TWA	525 mg/m <sup>3</sup>	CA ON OEL
		TWA	200 mg/m <sup>3</sup> (as total hydrocarbon vapor)	ACGIH
Limonene	5989-27-5	TWA	20 ppm 111 mg/m <sup>3</sup>	CA AB OEL
		TWA	20 ppm 111 mg/m <sup>3</sup>	CA AB OEL
		TWA	20 ppm	ACGIH

**Personal protective equipment**

- Respiratory protection : No personal respiratory protective equipment normally required.
- Eye protection : No special protective equipment required.  
Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : No special protective equipment required.
- Protective measures : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
Avoid contact with eyes.

**GOJO® NATURAL \* ORANGE™ Pumice Hand Cleaner**

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: liquid
Colour	: grey, opaque
Odour	: citrus
Odour Threshold	: No data available
pH	: 6.0 - 8.0, (20 °C)
Solidification / Setting point	: 11.4 °C
Initial boiling point and boiling range	: 98.00 °C
Flash point	: > 100 °C
Evaporation rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: 1.0328 g/cm <sup>3</sup>
Solubility(ies) Water solubility	: soluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available
Thermal decomposition	: The substance or mixture is not classified self-reactive.
Viscosity Viscosity, kinematic	: 10000 - 50000 mm <sup>2</sup> /s (20 °C)
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.



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Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : No hazardous decomposition products are known.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Inhalation  
Eye contact  
Skin contact

**Acute toxicity**

Not classified based on available information.

**Components:****C11-15 Alkane/cycloalkane:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.3 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

**Limonene:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute oral toxicity  
Remarks: Based on data from similar materials

**Skin corrosion/irritation**

Not classified based on available information.

**Components:****C11-15 Alkane/cycloalkane:**

Assessment: Repeated exposure may cause skin dryness or cracking.

**Limonene:**

Species: Rabbit  
Result: Skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:**


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**C11-15 Alkane/cycloalkane:**

Species: Rabbit

Result: No eye irritation

**Limonene:**

Species: Rabbit

Result: No eye irritation

**Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

**Product:**

Assessment: Does not cause skin sensitisation.

**Components:****C11-15 Alkane/cycloalkane:**

Test Type: Maximisation Test (GPMT)

Exposure routes: Skin contact

Species: Guinea pig

Result: negative

Remarks: Based on data from similar materials

**Limonene:**

Test Type: Local lymph node assay (LLNA)

Exposure routes: Skin contact

Species: Mouse

Result: positive

Assessment: Probability or evidence of skin sensitisation in humans

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****C11-15 Alkane/cycloalkane:**Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negativeGenotoxicity in vivo : Test Type: Chromosomal aberration  
Test species: Rat  
Application Route: Intraperitoneal injection  
Result: negative  
Remarks: Based on data from similar materials**Limonene:**Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Result: negativeGenotoxicity in vivo : Test Type: Transgenic rodent somatic cell gene mutation assay  
Test species: Rat  
Application Route: Ingestion  
Result: negative

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**Carcinogenicity**

Not classified based on available information.

**Components:****Limonene:**

Species: Mouse

Application Route: Ingestion

Exposure time: 103 weeks

Result: negative

**Reproductive toxicity**

Not classified based on available information.

**Components:****C11-15 Alkane/cycloalkane:**

Effects on fertility : Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Repeated dose toxicity****Components:****C11-15 Alkane/cycloalkane:**

Species: Rat

NOAEL: &gt; 10.4 mg/l

Application Route: inhalation (vapour)

Exposure time: 90 d

Remarks: Based on data from similar materials

**Limonene:**

Species: Rat

NOAEL: 600 mg/kg

Application Route: Ingestion

Exposure time: 13 w

**Aspiration toxicity**

Not classified based on available information.

**Components:****C11-15 Alkane/cycloalkane:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.


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**Limonene:**

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

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**SECTION 12. ECOLOGICAL INFORMATION**
**Ecotoxicity****Components:****C11-15 Alkane/cycloalkane:**

- Toxicity to fish : LL50 (Danio rerio (zebra fish)): > 250 mg/l  
Exposure time: 96 h  
Test substance: Water Accommodated Fraction  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EL50 (Acartia tonsa): > 3,193 mg/l  
Exposure time: 48 h  
Test substance: Water Accommodated Fraction
- Toxicity to algae : EL50 (Skeletonema costatum (marine diatom)): > 3,200 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction
- NOELR (Skeletonema costatum (marine diatom)): 993 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Ceriodaphnia Dubia (water flea)): > 70 mg/l  
Exposure time: 8 d  
Test substance: Water Accommodated Fraction
- Toxicity to bacteria : EC50: > 100 mg/l  
Exposure time: 3 h

**Limonene:**

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.72 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.36 mg/l  
Exposure time: 48 h
- Toxicity to algae : ErC50 (Desmodesmus subspicatus (green algae)): 150 mg/l  
Exposure time: 72 h  
Test substance: Water Accommodated Fraction  
Remarks: Based on data from similar materials
- M-Factor (Acute aquatic toxicity) : 1

**Persistence and degradability****Components:****C11-15 Alkane/cycloalkane:**

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Biodegradability : Result: Readily biodegradable.  
Biodegradation: 82 %  
Exposure time: 24 d  
Method: OECD Test Guideline 301F

**Limonene:**  
Biodegradability : Result: Readily biodegradable.  
Biodegradation: 80 %  
Exposure time: 28 d  
Remarks: Based on data from similar materials

**Bioaccumulative potential****Components:**

**Limonene:**  
Partition coefficient: n- : log Pow: 4.38  
octanol/water

**Mobility in soil**

No data available

**Other adverse effects**

No data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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**SECTION 14. TRANSPORT INFORMATION****International Regulation****IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**National Regulations****TDG**

Not regulated as a dangerous good

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**SECTION 15. REGULATORY INFORMATION**

**WHMIS Classification** : Not controlled.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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**The components of this product are reported in the following inventories:**

TSCA	: On TSCA Inventory
CH INV	: On the inventory, or in compliance with the inventory
AICS	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL.
PICCS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

**SECTION 16. OTHER INFORMATION**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)



## Section 1: Identification

**Product Identifier:** Guardol ECT™ Motor Oil  
**Other means of identification:** Guardol ECT™ Motor Oil, SAE 10W-30  
Guardol ECT™ Motor Oil, SAE 15W-40  
**SDS Number:** 778844  
**Intended Use:** Heavy Duty Diesel Engine Oil  
**Uses Advised Against:** All others  
**24 Hour Emergency Phone Number:** CHEMTREC 800-424-9300 (24 Hours)  
CANUTEC 613-996-6666  
CHEMTREC Mexico 01-800-681-9531

<b>Manufacturer:</b> Phillips 66 Lubricants P.O. Box 4428 Houston, TX 77210	<b>SDS Information:</b> Phone: 800-762-0942 Email: SDS@P66.com URL: www.Phillips66.com	<b>Customer Service:</b> U.S.: 1-800-822-6457 or International: +1-83-2486-3363 <b>Technical Information:</b> 1-877-445-9198
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## Section 2: Hazards Identification

<b>Classified Hazards</b> This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.	<b>Other Hazards</b> None Known
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### Label Elements

No classified hazards

## Section 3: Composition / Information on Ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Lubricant Base Oil (Petroleum)	VARIOUS	>75
Non-Hazardous Materials	VARIOUS	<25

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## Section 4: First Aid Measures

**Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

**Inhalation (Breathing):** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion (Swallowing):** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Dry skin and possible irritation with repeated or prolonged exposure.

**Notes to Physician:** Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

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## Section 5: Fire-Fighting Measures

### NFPA 704 Hazard Class

Health: 0 Flammability: 1 Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

**Special protective actions for firefighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

## Section 7: Handling and Storage



**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. Used motor oils have been shown to cause skin cancer in mice after repeated application to the skin without washing. Brief or intermittent skin contact with used motor oil is not expected to cause harm if the oil is thoroughly removed by washing with soap and water. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

**Section 8: Exposure controls/personal protection**

Chemical Name	ACGIH	OSHA	Other
Lubricant Base Oil (Petroleum)	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	TWA: 5 mg/m <sup>3</sup> as Oil Mist, if generated	---

**Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.**

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

**Skin/Hand Protection:** The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Suggested protective materials: Nitrile

**Respiratory Protection:** Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

**Section 9: Physical and Chemical Properties**

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

**Appearance:** light brown

**Physical Form:** Liquid

**Odor:** Petroleum

**Odor Threshold:** No data

**pH:** Not applicable

**Vapor Density (air=1):** >1

**Upper Explosive Limits (vol % in air):** No data

**Lower Explosive Limits (vol % in air):** No data

**Evaporation Rate (nBuAc=1):** No data

**Particle Size:** Not applicable

**Flash Point:** > 438 °F / > 226 °C

**Test Method:** Cleveland Open Cup (COC), ASTM D92

**Initial Boiling Point/Range:** No data

**Vapor Pressure:** <1 mm Hg

**Partition Coefficient (n-octanol/water) (Kow):** No data

**Melting/Freezing Point:** No data

**Auto-ignition Temperature:** No data

**Decomposition Temperature:** No data

**Specific Gravity (water=1):** 0.8707 - 0.8759 @ 68°F (20°C)

**Bulk Density:** 7.27 - 7.31 lbs/gal

Percent Volatile: Negligible  
Flammability (solid, gas): Not applicable  
Solubility in Water: Negligible

Viscosity: 12.2 - 15.3 cSt @ 100°C; 80 - 117 cSt @ 40°C  
Pour Point: -40 °F / -40 °C

## Section 10: Stability and Reactivity

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**Incompatible materials:** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use. During use in engines, contamination of oil with low levels of hazardous fuel combustion by-products may occur. Repeated and prolonged skin contact can cause drying and cracking.

## Section 11: Toxicological Information

### Information on Toxicological Effects of Substance/Mixture

#### Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** Not expected to be an aspiration hazard.

**Skin Corrosion/Irritation:** Not expected to be irritating. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Not expected to be irritating.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific Target Organ Toxicity (Repeated Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

**Other Comments:** None Known

### Information on Toxicological Effects of Components Lubricant Base Oil (Petroleum)

*Carcinogenicity:* The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

## Section 12: Ecological Information

### GHS Classification: No classified hazards

**Toxicity:** All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

**Persistence and Degradability:** The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

**Bioaccumulative Potential:** Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

**Mobility in Soil:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

**Other adverse effects:** None anticipated.

## Section 13: Disposal Considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

## Section 14: Transport Information

### U.S. Department of Transportation (DOT)

**Shipping Description:** *Not regulated*

**Note:** *If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)*

### International Maritime Dangerous Goods (IMDG)

**Shipping Description:** *Not regulated*

**Note:** *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.*

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not applicable

### International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

**UN/ID #:** *Not regulated*

**Note:** *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.*

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
<b>Packaging Instruction #:</b>	---	---	---
<b>Max. Net Qty. Per Package:</b>	---	---	---

## Section 15: Regulatory Information

### CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

### CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Acute Health Hazard:	No
Chronic Health Hazard:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactive Hazard:	No

### CERCLA/SARA - Section 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

Chemical Name	Concentration <sup>1</sup>	de minimis
Zinc Compound(s)	1.0 - 1.5	1.0%

### EPA (CERCLA) Reportable Quantity (in pounds):

This material does not contain any chemicals with CERCLA Reportable Quantities.

### California Proposition 65:

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

### International Hazard Classification

#### Canada:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

#### **WHMIS Hazard Class:**

none

### National Chemical Inventories

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.

All components are either on the DSL, or are exempt from DSL listing requirements.

**U.S. Export Control Classification Number:** EAR99

## Section 16: Other Information

Date of Issue:	Previous Issue Date:	SDS Number:	Status:
26-Jun-2014	28-May-2008	778844	FINAL

### **Revised Sections or Basis for Revision:**

Identified Hazards (Section 2); Composition (Section 3); Environmental hazards (Section 12)

### **Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

**Disclaimer of Expressed and implied Warranties:**

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

**MSDS - Material Safety Data Sheet****Product Name: GUNK INDUSTRIAL GLASS CLEANER**

MSDS No.: PDWGC-5G

**I. Basic Information:****Manufacturer:** RADIATOR SPECIALTY COMPANY**Address:** 600 RADIATOR ROAD**City, ST Zip:** INDIAN TRAIL, NC 28079**Country:****Contact:** Robert Geer**Information Telephone Number:** 704-684--181 1**Emergency Contact:** RMPDC (877-740-5015)**Emergency Telephone Number:** 303-623-5716**Emergency Restrictions:****Product Name:** GUNK INDUSTRIAL GLASS CLEANER**MSDS No.:** PDWGC-5G**Issue Date:** 04/14/2008**Supersedes Date:** Not Available**II. Hazards Identification:****EMERGENCY OVERVIEW**

CAUTION: Eye Irritant.

**OSHA Regulatory Status**

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product.

**Potential Health Effects****Route(s) of Entry:**

Absorption, Eye, Inhalation, and Ingestion.

**Health Hazards (Acute and Chronic):**

See signs and symptoms below

**Signs and Symptoms:**

Eye Contact: Direct spray of vapors may be irritating or harmful to eyes.

Skin Contact: Prolonged contact may cause irritation due to defatting of skin.

Inhalation: High concentration of vapors may irritate nose and throat and cause headaches and nausea.

Ingestion: Can cause irritation, gastric disturbances, and nausea..

**Medical Conditions Generally Aggravated by Exposure:**

None Known

**Other Health Warnings:**

None Known

**Potential Environmental Effects**

Not Available

**III. Composition/Information on Ingredients:**

Chemical Name	CAS No.	% Range	Trade Secret
Ammonium hydroxide	1336-21-6	0.1 - 1.0	
Tripropylene Glycol Monomethyl Ether	25498-49-1	3.0 - 7.0	

**IV. First Aid Measures:****Emergency and First Aid Procedures:**

Eye Contact: Flush eyes with water for 15 minutes while lifting upper and lower eyelid. Get prompt medical attention.

Skin Contact: Wash with soap and water. If irritation persists, get prompt medical attention.

Inhalation: Move to fresh air. If breathing becomes difficult, give oxygen and get prompt medical attention.

Ingestion: Drink water or milk. Call Poison Control Center, physician, or hospital emergency room immediately.

**Note to Physicians:**

N/E

**MSDS - Material Safety Data Sheet****Product Name: GUNK INDUSTRIAL GLASS CLEANER**

MSDS No.: PDWGC-5G

**V. Fire Fighting Measures:****Suitable Extinguishing Media:**

Water Fog, Foam, Carbon Dioxide, Dry Chemical

**Unsuitable Extinguishing Media:**

None

**Products of Combustion:**

Carbon dioxide, carbon monoxide

**Protection of Firefighters:**

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

**VI. Accidental Release Measures:****Personal Precautions:**

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

**Environmental Precautions:**

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred.

**Methods for Containment:**

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

**Methods for Cleanup:**

Scoop absorbed waste into a chemical waste container. Neutralize remaining traces of material and flush with water followed by liberal covering with sodium bicarbonate. All clean-up material should be removed and placed in approved containers for disposal. Rinse water may be disposed of down a sanitary sewer system if authorized by the local municipality.

**Other Information:**

None

**VII. Handling and Storage:****Handling Precautions:**

Use with adequate ventilation. Do not take internally.

**Storage Precautions:**

Avoid contact with strong oxidizing agents. Do not store at temperatures above 120 F.

**VIII. Exposure Controls/Personal Protection:**

<b>Chemical Name</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>	<b>Other Limits</b>
Ammonium hydroxide	25 ppm (TWA)	25 ppm	Not Available
Tripropylene Glycol Monomethyl Ether	N/E	N/E	Not Available

**Engineering Controls:**

See above for applicable exposure limits. Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

**Personal Protective Equipment:**

For prolonged exposure wear protective safety glasses, gloves, and apron. Wash hands before handling food.

**MSDS - Material Safety Data Sheet****Product Name: GUNK INDUSTRIAL GLASS CLEANER**

MSDS No.: PDWGC-5G

**IX. Physical and Chemical Properties:**

Boiling Point: 212 F

Boiling Range: N/D

Solubility In Water: Soluble

Flash Point: None

Odor Threshold: N/D

Vapor Density (AIR = 1): N/D

pH Range: 11 - 12

Decomposition Temp: N/D

Lower Explosive Limit: N/D

Specific Gravity (H2O = 1): 1.00

Other Information: N/D

Melting Point: N/A

Freezing Point: N/D

Evaporation Rate (Butyl Acetate = 1): &lt; 1

Flash Point Method: TCC

Appearance and Odor: Clear liquid with alcohol-ammonia odor.

Vapor Pressure (mm Hg.): N/D

Partition Coefficient: N/D

Auto-Ignition Temp: N/D

Upper Explosive Limit: N/D

**X. Stability and Reactivity:****Stability:**

Stable

**Conditions to Avoid:**

Avoid heat, sparks, or flames.

**Incompatible Materials:**

Avoid contact with strong oxidizing agents

**Hazardous Decomposition Products:**

Carbon Monoxide, Carbon Dioxide

**Possibility of Hazardous Reactions:**

Will not occur

**XI. Toxicological Information:**

No data available.

**XII. Ecological Information:**

No data available

**XIII. Disposal Considerations:**

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the empty container and discard in the trash. Do not dump into sewers, on the ground, or into any body of water. Dispose of unused product in accordance with all local, state government and federal laws and regulations

**XIV. Transport Information:**

Shipping Name: Not Available

DOT Hazard Class: Not Available

UN/NA#: Not Available

**Transportation Information:**

DOT Subsidiary Hazard Class: Not Available

Packing Group: Not Available



# MSDS - Material Safety Data Sheet

## Product Name: GUNK INDUSTRIAL GLASS CLEANER

MSDS No.: PDWGC-5G

Shipping Name: Not regulated  
 DOT Hazard Class: Not regulates

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US): Not regulated

International:  
 ICAO/IATA: Not regulated

IMDG: Not Regulated

**XV. Regulatory Information:**

See Section 2 for SARA Reportable Chemicals.

USA TSCA: All components of this material are listed on the US TSCA Inventory.

States Right to Know:  
 Massachusetts: 1336-21-6  
 Pennsylvania: 1336-21-6

**XVI. Other Information:**

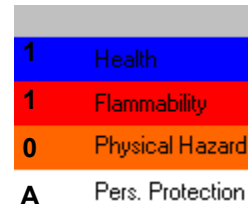
**Chemical State:**     Liquid     Gas     Solid  
**Chemical Type:**     Pure     Mixture  
**Hazard Category:**  
 Acute     Chronic     Fire  
 Pressure     Reactive



**Additional Manufacturer Warnings:**

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established  
 N/D: Not Determined  
 N/A: Not Applicable  
 N/AV: Not Available



**Additional Product Information:**

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

# SAFETY DATA SHEET



This Safety Data Sheet (SDS) complies with the requirements of the U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2012) and equivalent state Standards. It has also been developed in accordance with the United Nations Globally Harmonized System of Classification of Chemicals (GHS) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Refer to Section 16 of this document for the definition of terms and abbreviations.

## SECTION 1: IDENTIFICATION

### 1.1 PRODUCT IDENTIFIER

- ITEM NUMBER(S): 170041
- ZEP NUMBER: A00224
- PRODUCT NAME: **Hospital Surface Disinfectant Spray**

### 1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE

- RECOMMENDED USE: Cleaning and disinfecting of surfaces.
- IDENTIFIED USERS: For sale to, use and storage by service persons only.

### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

- MANUFACTURER/  
SUPPLIER: WAXIE Sanitary Supply
- ADDRESS: 9353 Waxie Way; San Diego, CA 92123-1036
- BUSINESS PHONE: 1-800-995-4466
- EMERGENCY PHONE: 1-800-255-3924 (CHEMTEL; 24 hours)

### 1.4 OTHER PERTINENT INFORMATION

- This product is sold and used in relatively small volumes. This SDS has been developed to address safety concerns affecting small volume handling situations and those involving warehouses and workplaces where large numbers of these items are stored or distributed.

## SECTION 2: HAZARD IDENTIFICATION

### 2.1 EMERGENCY OVERVIEW

Appearance	Aerosol containing a liquefied gas
Color	Colorless, light yellow
Odor	Pleasant

### 2.2 GHS CLASSIFICATION

#### OSHA/HCS Status

**Classification of the Substance or Mixture:** Flammable Aerosol (Category 2); Gases under pressure (Liquefied gas); Eye irritation (Category 2A)

### 2.3 LABEL ELEMENTS (suggested)

#### Hazard Pictograms:



#### Signal Word:

Danger.

#### Hazard Statements:

Flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation.

## SECTION 2: HAZARD IDENTIFICATION (Continued)

### Precautionary Statements

<b>Prevention:</b>	Keep out of reach of children. Read label before use. Keep away from heat, hot surfaces, sparks, open flames. Do not spray on an open flame or other ignition source. No smoking. Pressurized container: Do not pierce or burn, even after use. Wash skin thoroughly after handling. Wear eye protection/ face protection.
<b>Response:</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention
<b>Storage:</b>	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
<b>Disposal:</b>	Dispose of contents/container in accordance with local regulation.

### 2.4 OTHER PERTINENT HAZARDS NOT OTHERWISE CLASSIFIED

- Carcinogenicity:**

<b>IARC</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
<b>NTP</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 SUBSTANCES/MIXTURES

- Hazardous Components:**

CHEMICAL	CAS NUMBER	% (v/v)
Ethanol	67-15-5	>= 30 - < 50
Butane	106-97-8	>= 10 - < 20
Propane	74-98-6	>= 1 - < 5
Propan-2-ol	67-63-0	>= 1 - < 5
Sodium nitrite	7632-00-0	>= 0.1 - < 1

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

<b>General advice:</b>	Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
<b>If inhaled:</b>	If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
<b>In case of skin contact:</b>	If skin irritation persists, call a physician. Wash off immediately with plenty of water for at least 15 minutes. If on clothes, remove clothes.
<b>In case of eye contact:</b>	Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.
<b>If swallowed:</b>	Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. DO NOT induce vomiting unless directed to do so by a physician or poison control

center. Take victim immediately to hospital.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 DESCRIPTION OF FIREFIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical Water spray jet
<b>Unsuitable extinguishing media:</b>	High volume water jet
<b>Specific hazards during firefighting:</b>	Do not allow run-off from fire fighting to enter drains or water courses.
<b>Hazardous combustion products:</b>	Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide. Smoke.
<b>Specific extinguishing methods:</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Further information:</b>	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
<b>Special protective equipment for firefighters:</b>	Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

<b>Personal precautions, protective equipment and emergency procedures:</b>	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
<b>Environmental precautions:</b>	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
<b>Methods and materials for containment and cleaning up:</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

## SECTION 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING AND STORAGE

<b>Advice on safe handling:</b>	Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Do not breathe vapors or spray mist. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Always replace cap after use.
<b>Conditions for safe storage:</b>	BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. No smoking. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. Keep in a dry, cool and well-ventilated place.
<b>Materials to avoid:</b>	Oxidizing agents.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

- **AIRBORNE EXPOSURE LIMITS:**

COMPONENT	ACGIH TLV	OSHA PEL	NIOSH REL	OTHER
Ethanol	STEL = 1000 ppm	TWA = 1000 ppm	TWA = 1000 ppm	NE
Propan-2-ol	TWA= 200 ppm; STEL = 400 ppm	TWA = 400 ppm	TWA= 400 ppm; STEL = 500 ppm	NE
Propane	Minimal Oxygen Content (19.5% at Sea Level)	TWA = 1000 ppm	TWA = 1000 ppm	NE
Butane	STEL = 1000 ppm	NE	TWA = 800 ppm	NE

- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** The following BEIs have been established for components of this product.

- **Propan-2-ol:** Acetone in Urine; End of Shift at End of Work Week; 40 mg/L

### 8.2 EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Respiratory protection:</b>	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
<b>Hand protection:</b>	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
<b>Eye protection:</b>	Safety glasses Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Skin and body protection:</b>	Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
<b>Hygiene measures:</b>	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Aerosol containing a liquefied gas.
<b>Color:</b>	Clear, light yellow.
<b>Odor:</b>	Characteristic.
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	10-11
<b>Melting point/freezing point:</b>	No data available.
<b>Boiling point:</b>	No data available.
<b>Flash point:</b>	Not applicable.
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	Flammable aerosol.
<b>Upper explosion limit:</b>	No data available.
<b>Lower explosion limit:</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Relative vapor density:</b>	No data available.
<b>Density:</b>	0.895 g/cm <sup>3</sup>
<b>Solubility(ies)/Water solubility</b>	Soluble.
<b>Solubility in other solvents</b>	Not determined.
<b>Partition coefficient: n-octanol/water:</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Thermal decomposition:</b>	No data available.
<b>Viscosity - Viscosity, kinematic:</b>	No data available.
<b>Heat of combustion:</b>	24.20 kJ/g

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 REACTIVITY, STABILITY, AND CONDITIONS TO AVOID

<b>Reactivity:</b>	Stable.
<b>Chemical stability:</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Vapors may form explosive mixture with air. No decomposition if stored and applied as directed.
<b>Conditions to avoid:</b>	Heat, flames and sparks. Extremes of temperature and direct sunlight.
<b>Incompatible materials:</b>	Oxidizing agents; reducing agents.
<b>Hazardous decomposition products:</b>	Carbon monoxide; carbon dioxide (CO <sub>2</sub> ) Nitrogen Oxides (NO <sub>x</sub> ).

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 INFORMATION ON ACUTE EFFECTS

#### PRODUCT

Acute oral toxicity	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute oral toxicity	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

#### COMPONENTS

##### **Ethanol**

Acute oral toxicity:	LD50 rat: 6,060 mg/kg
Acute inhalation toxicity:	LC50 rat: 124.7mg/l Exposure time 4 h

##### **Propan-2-ol**

Acute oral toxicity	LD50, Oral, Rat: 4, 396 mg/kg Method: Calculation Method
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##### **Propane**

Acute inhalation toxicity	LC50 mouse: 1,237 mg/l Exposure time: 2 h LC50 rat: 658 mg/l Exposure time: 4 h LC50 rat: 1,355 mg/l
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##### **Butane**

Acute inhalation toxicity	LC50 mouse: 1,237 mg/l Exposure time: 2 h LC50 rat: 1,355 mg/l
---------------------------	--

### 11.2 INFORMATION ON OTHER HEALTH EFFECTS

#### PRODUCT

<b>Skin corrosion/Irritation:</b>	Remarks: May cause skin irritation in susceptible persons.
<b>Serious eye damage/eye irritation:</b>	Remarks: Irritating to eyes.
<b>Respiratory or skin sensitization:</b>	No data available.

#### COMPONENTS

<b>Germ cell mutagenicity:</b>	No data available.
<b>Carcinogenicity:</b>	No data available.
<b>Reproductive toxicity:</b>	No data available.
<b>STOT - single exposure:</b>	No data available.
<b>STOT - repeated exposure:</b>	No data available.
<b>Aspiration toxicity:</b>	No data available.

#### FURTHER INFORMATION

No data available.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 TOXICITY INFORMATION

<b>Ecotoxicity:</b>	No data available.	
<b>Persistence and degradability:</b>	No data available.	
<b>Bioaccumulative potential – PRODUCT:</b>	Partition coefficient: n-octanol/water	No data available
<b>Bioaccumulative potential – BUTANE:</b>	Partition coefficient: n-octanol/water	Pow: 2.89
<b>Mobility in soil:</b>	No data available.	
<b>Other adverse effects:</b>	No data available.	

### 12.2 OTHER PRODUCT INFORMATION

<b>REGULATION:</b>	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
<b>Remarks :</b>	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
<b>Additional ecological information:</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

## SECTION 13: DISPOSAL CONSIDERATION

### 13.1 WASTE TREATMENT METHODS

- Dispose of in accordance with local, State and Federal regulations.
- Dispose of unused product properly. Do not re-use empty containers.

### 13.2 DISPOSAL CONSIDERATIONS

- **EPA RCRA WASTE CODE:** D001.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 DANGEROUS GOODS BASIC DESCRIPTION AND OTHER TRANSPORT INFORMATION

- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

ORM-D, CONSUMER COMMODITY

- **CANADIAN TRANSPORTATION INFORMATION:** This product is regulated by Transport Canada as dangerous goods under Canadian transportation standards. Use the following information:

UN 1950, Aerosols, Flammable, 2.1 (Limited Quantity)

- **IATA DESIGNATION:** This product is regulated as dangerous goods by the International Air Transport Association. Use the following information:

UN 1950, Aerosols, Flammable, 2.1 (Limited Quantity)

- **IMDG DESIGNATION:** This product is regulated as dangerous goods by the International Maritime Organization. Use the following information:

UN 1950, Aerosols, Flammable, 2.1 (Limited Quantity)

## SECTION 15: REGULATORY INFORMATION

### 15.1 UNITED STATES REGULATIONS

- **EPCRA - Emergency Planning and Community Right-to-Know Act**
- **CERCLA Reportable Quantity:** Some items listed are below limits and are not subject to GHS reporting requirements for this formulation.

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Acetone	67-64-1	5000	*
Sodium Nitrite	7632-00-0	100	*

*\*Calculated RQ exceeds reasonably attainable upper limit.*

- **SARA 304 Extremely Hazardous Substances Reportable Quantity:** This material does not contain any components with a section 304 EHS RQ.
- **Other Important Regulations:**
  - SARA 311/312 Hazards:** Fire Hazard; Sudden Release of Pressure Hazard; Acute Health Hazard
  - SARA 302:** SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
  - SARA 313:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
  - California Prop 65:** Product contains amounts of the **WARNING!** This product contains a following items below GHS reporting chemical known to the State of limits: California to cause cancer.  
biphenyl-2-ol – 90-43-7

### 15.2 OTHER REGULATIONS

**TSCA**  
**DSL**

On TSCA Inventory.

**AICS**  
**NZIoC**  
**PICCS**  
**IECSC**

This product contains one or several components that are not on the Canadian DSL nor NDSL.

Not in compliance with the inventory.

Not in compliance with the inventory.

Not in compliance with the inventory.

Not in compliance with the inventory.

#### Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## SECTION 16: OTHER INFORMATION

### 16.1 INDICATION OF CHANGE

- **DATE OF REVISION:** January 13, 2016
- **SUPERCEDES:** April 29, 2015
- **CHANGE INDICATED:** Format alterations.

### 16.2 KEY LITERATURE REFERENCES AND SOURCES FOR DATA

- SAFETY DATA SHEET FOR MANUFACTURER PRODUCT.

### 16.3 HAZARDOUS MATERIALS CLASSIFICATION SYSTEM

Health	2
Flammability	3
Physical Hazard	2
Protective Equipment	B/C

HMIS Personal Protective Equipment Rating: Occupational Use situations: B - Safety glasses and gloves. If splashes or sprays can occur: C- Add body protection.



## SECTION 16: OTHER INFORMATION (Continued)

### 16.4 PERSONAL PROTECTION SYMBOLS

Hand Protection



Eye/Face Protection



Body Protection

(When splashes/sprays may occur)



### 16.5 NFPA INFORMATION

NFPA Rating



NFPA Classification

Flammable Aerosol

### 16.6 DISCLAIMER

WAXIE Sanitary Supply makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of their own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by WAXIE Sanitary Supply as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does WAXIE Sanitary Supply assume any liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. WAXIE Sanitary Supply does not recommend blending this product with any other chemicals. All information, recommendations and data contained herein concerning this product are based upon information available at the time of writing from recognized technical sources.

### 16.7 ABBREVIATIONS AND ACRONYMS

**ALL SECTIONS:** **OSHA:** U.S. Federal Occupational Safety and Health Administration. **WHMIS:** Canadian Workplace Hazardous Materials Standard. **GHS:** Globally Harmonized System of Classification of Chemical Substances. **REACH:** European Union regulation, Registration, Evaluation, Authorization and Restriction of Chemical substances.

**SECTION 2:** **CAS Number:** Chemical Abstract Service Number, which is used by the American chemical Society to uniquely identify a chemical.

**SECTION 5:** **NFPA:** National Fire Protection Association. **NFPA FLAMMABILITY CLASSIFICATION:** The NFPA uses the flash point (F.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.P. below 73°F and BP below 100°F. Class IB: F.P. below 73°F and BP at or above 100°F. Class IC: :F.P. at or above 73°F and BP at or above 100°F. Class II: : F.P. at or above 100°F and below 140°F. Class IIIA: F.P. at or above 140°F and below 200°F. Class IIIB: F.P. at or above 200°F. **NFPA HAZARDOUS MATERIALS RATING:** This is a rating system used to summarize physical and health hazards to firefighters. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

**SECTION 8:** **NE:** Not established. **ACGIH:** American Conference of Government Industrial Hygienists; **TWA:** Time-Weighted Average (over an 8-hour work day); **STEL:** Short-Term Exposure Limit (15 minute average, no more than 4-times daily and each exposure separated by one-hour minimally); **C:** Ceiling Limit (concentration not to be exceeded in a work environment). **PEL:** Permissible Exposure Limit. **NIOSH:** National Institute of Occupational Safety and Health; **REL:** Recommended Exposure Limit; **IDLH:** Immediately Dangerous to Life and Health Concentrations. *Note:* In July 1992, a court ruling vacated the more protective PELs set by OSHA in 1989. Because OSHA may enforce the more protective levels under the "general duty clause", both the current and vacated levels are presented in this document. **ppm:** Parts per Million. **mg/m<sup>3</sup>:** Milligrams per cubic meter. **mppcf:** Millions of Particles per Cubic Foot. **BEI:** Biological Exposure Limit. **EL:** Exposure Limit (United Kingdom). Federal Republic of Germany (**DFG**) Maximum Concentration Values in the Workplace (**MAKs**)

**SECTION 9:** **pH:** Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, pH of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. **FLASH POINT:** Temperature at which a liquid generates enough flammable vapors so that ignition may occur. **AUTOIGNITION TEMPERATURE:** Temperature at which spontaneous ignition occurs.

**SECTION 9 (Continued):** **LOWER EXPLOSIVE LIMIT (LEL):** The minimal concentration of flammable vapors in air which will sustain ignition. **UPPER EXPLOSIVE LIMIT (UEL):** The maximum concentration of flammable vapors in air which will sustain ignition. ≈: Approximately symbol. **VOC:** Volatile Organic Compound.

**SECTION 11:** **CARCINOGENICITY STATUS:** **NTP:** National Toxicology Program. **IARC:** International Agency for Research on Cancer. **REPRODUCTIVE TOXICITY INFORMATION:** **Mutagen:** Substance capable of causing chromosomal damage to cells. **Embryotoxin:** Substance capable of damaging the developing embryo in an overexposed female. **Teratogen:** Substance capable of damaging the developing fetus in an overexposed female. **Reproductive toxin:** Substance capable of adversely affecting male or female reproductive organs or functions. **TOXICOLOGY DATA:** **LD<sub>xx</sub>or LC<sub>xx</sub>:** The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designate route of administration. This value is used to access the toxicity of chemical substances to humans. **TD<sub>xx</sub>or TC<sub>xx</sub>:** The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designate route of administration.

**SECTION 12:** **EC50:** Effect Concentration (on 50% of study group); **BOD:** Biological Oxygen Demand. **N/LOEC:** No/Lowest Observable Effect Concentration.

**SECTION 13:** **RCRA:** Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. **EPA RCRA Waste Codes:** Defined in 40 CFR Section 261.

**SECTION 15:** **CERCLA:** Comprehensive Environmental Response Compensation and Liability Act (a.k.a. "Superfund") and SARA: (Superfund Amendment and Reauthorization Act). The regulations promulgated under this Act are located under 40 CFR 300 ff. and provide "community right-to-know" requirements. **TSCA:** Toxic Substances Control Act: Rules regulating the manufacture and sale of chemicals found in 40 CFR 700-766. **DSL/NDL:** Canadian Domestic Substances and Non-Domestic Substances Lists.

**SECTION 16:** **HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING:** This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)



## Section 1: Identification

**Product Identifier:** HT/4 Fluid  
**Other means of identification:** 76 HT/4 Fluid, SAE 10W  
76 HT/4 Fluid, SAE 30  
76 HT/4 Fluid, SAE 50  
76 HT/4 Fluid, SAE 60  
**SDS Number:** 721110  
**Intended Use:** Transmission Fluid  
**Uses Advised Against:** All others  
**Emergency Health and Safety Number:** CHEMTREC 800-424-9300 (24 Hours)  
CANUTEC 613-996-6666  
CHEMTREC Mexico 01-800-681-9531

**Manufacturer:** Phillips 66 Lubricants  
P.O. Box 4428  
Houston, TX 77210  
**SDS Information:** Phone: 800-762-0942  
Email: SDS@P66.com  
URL: www.Phillips66.com  
**Customer Service:** U.S.: 1-800-822-6457 or International: +1-83-2486-3363  
**Technical Information:** 1-877-445-9198

## Section 2: Hazards Identification

**Classified Hazards** This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.  
**Other Hazards** None Known

### Label Elements

No classified hazards

## Section 3: Composition / Information on Ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Distillates, petroleum, hydrotreated heavy paraffinic	64742-54-7	0 - 95
Distillates, petroleum, solvent-refined heavy paraffinic	64741-88-4	0 - 85
Residual oils, petroleum, solvent-dewaxed	64742-62-7	0 - 75
Distillates, petroleum, solvent-dewaxed heavy paraffinic	64742-65-0	0 - 70
Non-Hazardous Materials	VARIOUS	<10

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## Section 4: First Aid Measures

**Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

**Inhalation (Breathing):** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion (Swallowing):** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Dry skin and possible irritation with repeated or prolonged exposure.

**Notes to Physician:** Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

## Section 5: Fire-Fighting Measures

### NFPA 704 Hazard Class

Health: 0 Flammability: 1 Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

**Special protective actions for firefighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

**Section 7: Handling and Storage**

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

**Section 8: Exposure Controls / Personal Protection**

Chemical Name	ACGIH	OSHA	Other
Distillates, petroleum, hydrotreated heavy paraffinic	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	TWA: 5mg/m <sup>3</sup> as Oil Mist, if Generated	---
Distillates, petroleum, solvent-refined heavy paraffinic	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	TWA: 5mg/m <sup>3</sup> as Oil Mist, if Generated	---
Residual oils, petroleum, solvent-dewaxed	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	TWA: 5mg/m <sup>3</sup> as Oil Mist, if Generated	---
Distillates, petroleum, solvent-dewaxed heavy paraffinic	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	TWA: 5mg/m <sup>3</sup> as Oil Mist, if Generated	---

**Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.**

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

**Skin/Hand Protection:** The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Suggested protective materials: Nitrile

**Respiratory Protection:** Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

## Section 9: Physical and Chemical Properties

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

**Appearance:** Amber, Transparent

**Physical Form:** Liquid

**Odor:** Petroleum

**Odor Threshold:** No data

**pH:** Not applicable

**Vapor Density (air=1):** >1

**Upper Explosive Limits (vol % in air):** No data

**Lower Explosive Limits (vol % in air):** No data

**Evaporation Rate (nBuAc=1):** <1

**Particle Size:** N/A

**Percent Volatile:** Nil

**Flammability (solid, gas):** N/A

**Solubility in Water:** Negligible

**Flash Point:** > 200 °F / > 93 °C

**Test Method:** Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010

**Initial Boiling Point/Range:** No data

**Vapor Pressure:** <1 mm Hg

**Partition Coefficient (n-octanol/water) (Kow):** No data

**Melting/Freezing Point:** No data

**Auto-ignition Temperature:** No data

**Decomposition Temperature:** No data

**Specific Gravity (water=1):** 0.875 - 0.896 @ 60°F (15.6°C)

**Bulk Density:** 7.2 - 7.5 lbs/gal

**Viscosity:** 6.2 - 26 cSt @ 100°C; 43 - 324 cSt @ 40°C

**Pour Point:** -37 to -12 °F / -38 to -24 °C

## Section 10: Stability and Reactivity

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**Incompatible materials:** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use.

## Section 11: Toxicological Information

### Information on Toxicological Effects of Substance/Mixture

#### Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** Not expected to be an aspiration hazard.

**Skin Corrosion/Irritation:** Not expected to be irritating. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Not expected to be irritating.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific Target Organ Toxicity (Repeated Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

#### Information on Toxicological Effects of Components

##### Lubricant Base Oil (Petroleum)

*Carcinogenicity:* The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

##### Phenol, (tetrapropenyl) derivatives

*Reproductive Toxicity:* This product contains low levels of phenol, (tetrapropenyl) derivatives. Rats given high, repeated daily doses of phenol, (tetrapropenyl) derivatives by oral intubation experienced adverse reproductive effects. Pregnant rats given high, repeated daily doses of phenol, (tetrapropenyl) derivatives by oral intubation gave birth to pups with cleft palate and skeletal malformations at dose levels that caused maternal toxicity. Follow-up studies of phenol, (tetrapropenyl) derivatives in finished lubricating fluids demonstrated a no-observed effect level of 1.78 wt%.

## Section 12: Ecological Information

**GHS Classification:**  
No classified hazards

**Toxicity:** All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

**Persistence and Degradability:** The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

**Bioaccumulative Potential:** Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

**Mobility in Soil:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

**Other adverse effects:** None anticipated.

## Section 13: Disposal Considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

**Section 14: Transport Information**

**U.S. Department of Transportation (DOT)**

**Shipping Description:** *Not regulated*  
**Note:** *If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)*

**International Maritime Dangerous Goods (IMDG)**

**Shipping Description:** *Not regulated*  
**Note:** *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.*

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)**

**UN/ID #:** *Not regulated*  
**Note:** *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.*

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
<b>Packaging Instruction #:</b>	---	---	---
<b>Max. Net Qty. Per Package:</b>	---	---	---

**Section 15: Regulatory Information**

**CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

**CERCLA/SARA - Section 311/312 (Title III Hazard Categories)**

**Acute Health Hazard:** No  
**Chronic Health Hazard:** No  
**Fire Hazard:** No  
**Pressure Hazard:** No  
**Reactive Hazard:** No

**CERCLA/SARA - Section 313 and 40 CFR 372:**

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

Chemical Name	Concentration <sup>1</sup>	de minimis
Zinc Compound(s)	<2	1.0%

**EPA (CERCLA) Reportable Quantity (in pounds):**

This material does not contain any chemicals with CERCLA Reportable Quantities.

**California Proposition 65:**

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

**International Hazard Classification**

**Canada:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

**WHMIS Hazard Class:**

none

**National Chemical Inventories**

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.

All components are either on the DSL, or are exempt from DSL listing requirements.

**U.S. Export Control Classification Number:** EAR99

**Section 16: Other Information**

Date of Issue:	Previous Issue Date:	SDS Number:	Status:
17-Jan-2014	13-Mar-2013	721110	FINAL

**Revised Sections or Basis for Revision:**

Precautionary Statement(s) (Section 2); Composition (Section 3); Physical Properties (Section 9)

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

**Disclaimer of Expressed and implied Warranties:**

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.





## CANBERRA CORPORATION SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** HUSKY 1200 FURNITURE POLISH

**Application or recommended use:** Furniture polish

**Restrictions on use:** Do not use in any fashion not specified on the product label.

**Manufacturer / supplier:** Canberra Corporation

3610 N. Holland-Sylvania Rd.

Toledo, Ohio 43615 USA

**Telephone:** 419-841-6616 **Emergency phone:** 866-836-8855

### 2. Hazards Identification

**GHS Classification:** Classification of this mixture in accordance with paragraph (d) of §1910.1200.  
Flammable Aerosols – Category 1

**Label Elements:**



Symbol:

Signal word: **DANGER**

Hazard statements: Extremely flammable aerosol.

Precautionary statements: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

See 4. First-Aid Measures for specific treatment.

Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Dispose of contents/container to an approved disposal facility.

**Other Hazards:** None known.

### 3. Composition / Information on Ingredients

**Chemical characterization:** Mixture of water, emulsifiers, solvents and auxiliary agents.

**Hazardous ingredients:** The exact percentage of composition has been withheld as a trade secret.

2 - 10% Butane CAS 106-97-8

1 - 3% Propane CAS 74-98-6

### 4. First-Aid Measures

**Symptoms:** Direct contact with eyes may cause temporary irritation.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Inhalation:** Remove person to fresh air and keep comfortable for breathing.

**Skin Contact:** Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water. If irritation occurs, get medical advice/attention.

**Eye Contact:** Hold eye open and rinse slowly and gently with water for 5-10 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. If eye irritation persists, get medical advice/attention.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Rinse mouth with water.

**Note to Physician:** Provide supportive measures, treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### 5. Fire-Fighting Measures

**Suitable extinguishing media:** Not available.

**Unsuitable extinguishing Media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from chemical:** Contents under pressure. Pressurized container may explode if exposed to heat or flame.

**Special protective equipment and precautions for firefighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, and rubber boots.

**Fire-fighting equipment/instructions:** Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.

**Specific methods:** Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

**General fire hazards:** Extremely flammable aerosol.

## **6. Accidental Release Measures**

**Emergency procedures:** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

**Personal Precautions:** Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean-up.

**Environmental precautions** Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**Clean up Methods:** Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Wipe up with absorbent material (e.g. cloth). Clean surface thoroughly to remove residual contamination.

## **7. Handling and storage**

**Precautions for safe handling:** Pressurized container. Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment.

**Conditions for safe storage, including any incompatibilities:** Level 1 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials.

## **8. Exposure controls/personal protection**

### **Occupational exposure limits**

#### **US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m <sup>3</sup> (1000 ppm)

#### **US. ACGIH Threshold Limit Values**

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm

#### **US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m <sup>3</sup> (800 ppm)
Propane (CAS 74-98-6)	TWA	1800 mg/m <sup>3</sup> (1000 ppm)

### **Appropriate engineering controls**

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### **Individual protection measures, such as personal protective equipment**

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

**Hand protection:** Wear appropriate chemical resistant gloves.

**Other:** Wear suitable protective clothing.

**Respiratory protection:** If permissible levels are exceeded use organic vapor cartridge or an air-supplied respirator.

**General hygiene considerations:** When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## **9. Physical and chemical properties**

**Physical state:** Gas.

**Color:** Not available.

**Odor threshold:** Not available.

**Melting point/freezing point:** Not available.

**Flash point:** -156.0 °F (-104.4 °C) Propellant estimated

**Flammability:** Not available.

### **Upper/lower flammability or explosive limits**

**Flammability limit – lower (%):** Not available.

**Explosive limit - lower (%):** Not available.

**Vapor pressure:** 65 - 85 psig @20C estimated

**Solubility (water):** Not available.

**Auto-ignition temperature:** Not available.

**Relative density:** Not available.

**Form:** Aerosol.

**Odor:** Not available.

**pH:** Not available.

**Initial boiling point/boiling range:** 212 °F (100 °C) estimated

**Evaporation rate:** Not available.

**Viscosity:** Not available.

**Flammability limit – upper (%):** Not available.

**Explosive limit - upper (%):** Not available.

**Vapor density:** Not available.

**Partition coefficient (n-octanol/water):** Not available.

**Decomposition temperature:** Not available.

**Specific gravity:** 0.924 estimated

**10. Stability and reactivity**

**Reactivity:** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability:** Material is stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerization does not occur.

**Conditions to avoid:** Avoid temperatures exceeding the flash point. Contact with incompatible materials.

**Incompatible materials:** Strong oxidizing agents.

**Hazardous decomposition products:** No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

**Ingestion:** Expected to be a low ingestion hazard. **Inhalation:** No adverse effects due to inhalation are expected.

**Skin contact:** No adverse effects due to skin contact are expected.

**Eye contact:** Direct contact with eyes may cause temporary irritation.

**Information on toxicological effects**

**Skin corrosion/irritation:** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation:** Direct contact with eyes may cause temporary irritation.

**Respiratory sensitization:** Not available. **Skin sensitization:** This product is not expected to cause skin sensitization.

**Carcinogenicity:** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.

**Reproductive toxicity:** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure:** Not classified.

**Specific target organ toxicity - repeated exposure:** Not classified.

**Aspiration hazard:** Not likely, due to the form of the product.

**12. Ecological information**

**Ecotoxicity:** Harmful to aquatic life with long lasting effects.

**Persistence and degradability:** No data is available on the degradability of this product.

**Bioaccumulative potential:** No data available.

**Partition coefficient n-octanol / water (log Kow):** Butane 2.89      Propane 2.36

**Mobility in soil:** No data available.

**Other adverse effects:** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Waste from residues/unused products:** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

**Contaminated packaging:** Empty containers should be taken to an approved waste site for recycling or disposal. Emptied containers may retain product residue. Follow label warnings even after container is emptied.

**14. Transport information**

**DOT:** UN number UN1950      UN proper shipping name Aerosols, flammable      Class 2.1

**Packing group:** Not applicable.

Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

**Packaging exceptions:** Product meets exception requirements of section 173.306 and may be shipped as a limited quantity.

**15. Regulatory information****US federal regulations:**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):** Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4):** Not listed.

**SARA 304 Emergency release notification:** Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories:**

Immediate Hazard – No      Delayed Hazard - No

Fire Hazard – Yes      Pressure Hazard - No

Reactivity Hazard - No

**SARA 311/312 Hazardous chemical:** No

**SARA 313 (TRI reporting):** Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List:** Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

Butane (CAS 106-97-8) Propane (CAS 74-98-6)

**Safe Drinking Water Act (SDWA):** Not regulated.

**US state regulations**

**US. Massachusetts RTK - Substance List**

**US. New Jersey Worker and Community Right-to-Know Act**

**US. Pennsylvania Worker and Community Right-to-Know Law**

**US. Rhode Island RTK**

Butane (CAS 106-97-8) Propane (CAS 74-98-6)

**US. California Proposition 65:** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain

**16. Other information, including date of preparation or last revision**

**Date issued:** 05. 01. 2015

HSK-1200 Revision: N/A

**Version** #01

**Disclaimer** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



## CANBERRA CORPORATION SAFETY DATA SHEET

### 1. Identification

**Product identifier:** HUSKY 1220 GLASS & CRT CLEANER

**Recommended use:** Cleaner

**Recommended restrictions:** None known.

**Company information:** CANBERRA CORP.  
3610 N. HOLLAND-SYLVANIA RD  
TOLEDO, OH 43615 United States

**Phone:** 419-841-6616

**Emergency telephone US:** 1-866-836-8855

### 2. Hazard(s) identification

**Physical hazards** Gases under pressure Liquefied gas

**Health hazards** Not classified.

**Label elements**

**Signal word** Warning

**Hazard statement** Contains gas under pressure; may explode if heated.

**Precautionary statement**

**Prevention** Observe good industrial hygiene practices.

**Response** Wash hands after handling.

**Storage** Protect from sunlight. Store in a well-ventilated place.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC):** None known.

### 3. Composition/information on ingredients

**Chemical characterization:** Mixture of water, solvents and auxiliary agents.

**Hazardous ingredients:** The exact percentage of composition has been withheld as a trade secret.

2 - 10% 2-Butoxyethanol CAS 111-76-2

2 - 10% Ethyl Alcohol CAS 64-17-5

1 - 3% Butane CAS 106-97-8

1 - 3% Propane CAS 74-98-6

### 4. First-aid measures

**Inhalation** Move to fresh air. Get medical attention if symptoms persist.

**Skin contact:** Get medical attention if irritation develops and persists.

**Eye contact:** Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion:** Rinse mouth.

**Most important symptoms/effects, acute and delayed:** Direct contact with eyes may cause temporary irritation.

**Indication of immediate medical attention and special treatment needed:** Provide general supportive measures and treat symptomatically.

**General information:** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical:** Contents under pressure. Gases hazardous to health may be formed in fire.

**Special protective equipment and precautions for firefighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire-fighting equipment/instructions:** In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** No unusual fire or explosion hazards noted.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. See Section 8 of the SDS for Personal Protective Equipment. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up:** Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

**Environmental precautions:** Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling** Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground and bond containers when transferring material. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities:** Level 1 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. OSHA**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3 (50 ppm)
Ethyl Alcohol (CAS 64-17-5)	PEL	1900 mg/m3 (1000 ppm)
Propane (CAS 74-98-6)	PEL	1800 mg/m3 (1000 ppm)

**US. ACGIH Threshold Limit Values**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm
Ethyl Alcohol (CAS 64-17-5)	STEL	1000 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3 (5 ppm)
Butane (CAS 106-97-8)	TWA	1900 mg/m3 (800 ppm)
Ethyl Alcohol (CAS 64-17-5)	TWA	1900 mg/m3 (1000 ppm)
Propane (CAS 74-98-6)	TWA	1800 mg/m3 (1000 ppm)

**Exposure guidelines**

**US - California OELs: Skin designation:** 2-Butoxyethanol Can be absorbed through skin.

**US - Minnesota Haz Subs: Skin designation applies:** 2-Butoxyethanol Skin designation applies.

**US - Tennessee OELs: Skin designation:** 2-Butoxyethanol Can be absorbed through skin.

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation:** 2-Butoxyethanol Can be absorbed through skin.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000):** 2-Butoxyethanol Can be absorbed through skin.

**Appropriate engineering controls:** Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection:** If contact is likely, safety glasses with side shields are recommended.

**Hand protection:** For prolonged or repeated skin contact use suitable protective gloves.

**Other:** Wear suitable protective clothing.

**Respiratory protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. **Thermal hazards** Wear appropriate thermal protective clothing, when necessary.  
**General hygiene considerations:** When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## **9. Physical and chemical properties**

**Appearance:** Clear.

**Form:** Aerosol. Liquefied gas.

**Odor:** Butyl

**pH:** 9.5 - 10.5 estimated

**Melting point/freezing point:** Not available.

**Evaporation rate:** Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit – lower (%):** Not available.

**Explosive limit - lower (%):** Not available.

**Vapor pressure:** 80 - 100 psig @70F estimated

**Relative density:** Not available.

**Partition coefficient (n-octanol/water):** Not available.

**Auto-ignition temperature:** Not available.

**Viscosity:** Not available.

**Deflagration density:** > 2.52 g/cm<sup>3</sup> Tested

**Aerosol spray ignition distance:** < 15 cm Tested estimated

**Physical state:** Gas.

**Color:** Colorless. Pale yellow

**Odor threshold:** Not available.

**Flash point:** -156.0 °F (-104.4 °C) Propellant estimated

**Initial boiling point and boiling range:** 212 °F (100 °C) estimated

**Flammability (solid, gas):** Not available.

**Flammability limit – upper (%):** Not available.

**Explosive limit - upper (%):** Not available.

**Vapor density:** Not available.

**Solubility (water):** Not available.

**Decomposition temperature:** Not available.

**Specific gravity:** 0.97 estimated

## **10. Stability and reactivity**

**Reactivity:** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability:** Material is stable under normal conditions.

**Incompatible materials:** Strong oxidizing agents.

**Possibility of hazardous reactions:** No dangerous reaction known under conditions of normal use. Hazardous polymerization does not occur.

**Conditions to avoid:** Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.

**Hazardous decomposition products:** No hazardous decomposition products are known.

## **11. Toxicological information**

**Information on likely routes of exposure:**

**Ingestion:** Expected to be a low ingestion hazard.

**Inhalation:** Prolonged inhalation may be harmful.

**Skin contact:** No adverse effects due to skin contact are expected. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

**Eye contact:** Direct contact with eyes may cause temporary irritation.

**Symptoms related to the physical, chemical and toxicological characteristics:**

Direct contact with eyes may cause temporary irritation.

**Information on toxicological effects:**

**Acute toxicity** Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

**Skin corrosion/irritation:** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation:** Direct contact with eyes may cause temporary irritation.

**Respiratory sensitization:** Not a respiratory sensitizer. **Skin sensitization:** Product is not expected to cause skin sensitization.

**Germ cell mutagenicity:** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity:** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity:**

2-Butoxyethanol                      3 Not classifiable as to carcinogenicity to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.

**Reproductive toxicity:** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure:** Not classified.

**Specific target organ toxicity - repeated exposure:** Not classified.

**Aspiration hazard:** Not an aspiration hazard. Not likely, due to the form of the product.

**Chronic effects:** Prolonged inhalation may be harmful. May be harmful if absorbed through skin. 2-Butoxy ethanol may be absorbed through skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Product number 1000014505

## **12. Ecological information**

**Ecotoxicity:** Harmful to aquatic life.

**Persistence and degradability:** No data is available on the degradability of this product.

**Bioaccumulative potential:** No data available.

**Partition coefficient n-octanol / water (log Kow)**

2-Butoxyethanol 0.83      Butane 2.89      Ethyl Alcohol -0.31      Propane 2.36

**Mobility in soil:** No data available.

**Other adverse effects:** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this material.

## **13. Disposal considerations**

**Disposal instructions:** Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations:** Dispose in accordance with all applicable regulations.

**Waste from residues / unused products:** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging:** Empty containers should be taken to an approved waste site for recycling or disposal. Emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

## **14. Transport information**

**DOT:**      **UN number:** UN1950      **UN proper shipping name:** Aerosols      **Class:** 2.2      **Packing group:** N/A

**Special precautions for user:** Read safety instructions, SDS and emergency procedures before handling.

**Packaging exceptions:** Product meets the exception requirements of section 173.306 and may be shipped as a limited quantity.

## **15. Regulatory information**

**US federal regulations:**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):** Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4):** Not listed.

**SARA 304 Emergency release notification:** Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard – No      Delayed Hazard – No      Fire Hazard - No

Pressure Hazard – Yes      Reactivity Hazard - No

**SARA 302 Extremely hazardous substance:** Not listed.

**SARA 311/312 Hazardous chemical:** No

**SARA 313 (TRI reporting):** 2-Butoxyethanol

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List:** Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):** Butane, Propane

**Safe Drinking Water Act (SDWA):** Not regulated.

**US state regulations**

**US. Massachusetts RTK - Substance List      US. Rhode Island RTK**

**US. New Jersey Worker and Community Right-to-Know Act**

**US. Pennsylvania Worker and Community Right-to-Know Law**

2-Butoxyethanol, Butane, Ethyl Alcohol, Propane

**US. California Proposition 65:**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

## **16. Other information, including date of preparation or last revision**

**Issue date** 01-05-2015

**Revision date** N/A

**References** EPA: AQUIRE database, NLM: Hazardous Substances Data Base

US. IARC Monographs on Occupational Exposures to Chemical Agents

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## CANBERRA CORPORATION SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** HUSKY 1240 FOAMING DISINFECTANT CLEANER

**Application or recommended use:** Hard surface disinfectant/cleaner

**Restrictions on use:** Do not use in any fashion not specified on the product label.

**Manufacturer / supplier:** Canberra Corporation  
3610 N. Holland-Sylvania Rd.  
Toledo, Ohio 43615 USA

**Telephone:** 419-841-6616 **Emergency phone:** 866-836-8855

### 2. Hazards Identification

**GHS Classification:** Classification of this mixture in accordance with paragraph (d) of §1910.1200.  
Flammable Aerosols - Category 1  
Eye Damage/Irritation - Category 2A

#### Label Elements:



Symbol:

Signal word: **DANGER**

Hazard statements: Extremely flammable aerosol. Causes serious eye irritation.

Precautionary statements: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.  
Wash thoroughly after handling. Wear eye/face protection.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.  
See 4. First-Aid Measures for specific treatment.  
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
Dispose of contents/container to an approved disposal facility.

**Other Hazards:** None known.

### 3. Composition / Information on Ingredients

**Chemical characterization:** Mixture of water, emulsifiers, solvents and auxiliary agents.

**Hazardous ingredients:** The exact percentage of composition has been withheld as a trade secret.

2 - 10% 2-Butoxyethanol CAS 111-76-2

1 - 2.5% Butane CAS 106-97-8

1 - 2.5% EDTA-Tetrasodium CAS 64-02-8

### 4. First-aid measures

**Inhalation:** Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact:** Wash off with soap and water. Get medical attention if irritation develops and persists.

**Eye contact:** Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion:** Rinse mouth. Get medical attention if symptoms occur.

**Most important symptoms/effects, acute and delayed:** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

**Indication of immediate medical attention and special treatment needed:** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

### 5. Fire-fighting measures

**Suitable extinguishing media:** Water.

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical:** Contents under pressure. Pressurized container may explode when exposed to heat or flame.

**Special protective equipment and precautions for firefighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, and rubber boots.

**Fire-fighting equipment/instructions:** Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

**Specific methods:** Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. In the event of fire and/or explosion do not breathe fumes. **General fire hazards:** Extremely flammable aerosol.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

**Methods and materials for containment and cleaning up:** Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

**Environmental precautions:** Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling** Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities:** Level 1 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store away from incompatible materials.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	PEL	240 mg/m3 (50 ppm)

**US. ACGIH Threshold Limit Values**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	20 ppm
Butane (CAS 106-97-8)	STEL	1000 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
2-Butoxyethanol (CAS 111-76-2)	TWA	24 mg/m3 (5 ppm)
Butane (CAS 106-97-8)	TWA	1900 mg/m3 (800 ppm)

**Exposure guidelines**

**US - California OELs: Skin designation**

**US - Tennessee OELs: Skin designation**

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

2-Butoxyethanol: Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

2-Butoxyethanol: Skin designation applies.

**Appropriate engineering controls:** Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

**Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

**Hand protection:** Wear appropriate chemical resistant gloves.

**Other:** Wear suitable protective clothing.

**Respiratory protection:** If permissible levels are exceeded use organic vapor cartridge or an air-supplied respirator.

**General hygiene considerations:** When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## **9. Physical and chemical properties**

### **Appearance**

**Physical state:** Gas.

**Color:** Not available.

**Odor threshold:** Not available.

**Melting point/freezing point:** Not available.

**Flash point:** -156.0 °F (-104.4 °C) Propellant estimated.

**Evaporation rate:** Not available.

### **Upper/lower flammability or explosive limits**

**Flammability limit – lower (%):** Not available.

**Explosive limit - lower (%):** Not available.

**Vapor pressure:** 55 - 75 psig @70F estimated

**Relative density:** Not available.

**Solubility (water):** Not available.

**Auto-ignition temperature:** Not available.

**Viscosity:** Not available.

**Form:** Aerosol.

**Odor:** Not available.

**pH:** Not available.

**Initial boiling point/boiling range:** 212 °F (100 °C) estimated.

**Flammability:** Not available.

**Flammability limit – upper (%):** Not available.

**Explosive limit - upper (%):** Not available.

**Vapor density:** Not available.

**Specific gravity:** 0.979 estimated

**Partition coefficient (n-octanol/water):** Not available.

**Decomposition temperature:** Not available.

## **10. Stability and reactivity**

**Reactivity:** Reacts violently with strong acids. This product may react with oxidizing agents.

**Chemical stability:** Material is stable under normal conditions.

**Possibility of hazardous reactions:** Hazardous polymerization does not occur.

**Conditions to avoid:** Do not mix with other chemicals. Contact with incompatible materials.

**Incompatible materials:** Acids. Oxidizing agents.

**Hazardous decomposition products:** No hazardous decomposition products are known.

## **11. Toxicological information**

### **Information on likely routes of exposure:**

**Ingestion:** Expected to be a low ingestion hazard.

**Inhalation:** Prolonged inhalation may be harmful.

**Skin contact:** 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

**Eye contact:** Causes serious eye irritation.

**Symptoms related to the physical, chemical and toxicological characteristics:** Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### **Information on toxicological effects:**

**Symptoms related to the physical, chemical and toxicological characteristics:** Headache. Irritation of nose and throat.

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Coughing. Skin irritation.

**Acute toxicity:** Harmful if inhaled. Harmful if swallowed.

**Skin corrosion/irritation:** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation:** Causes serious eye irritation.

**Respiratory sensitization:** Not available.

**Skin sensitization:** This product is not expected to cause skin sensitization.

**Carcinogenicity:** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.

**Reproductive toxicity:** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure:** Not classified.

**Specific target organ toxicity - repeated exposure:** Not classified.

**Aspiration hazard:** Not likely, due to the form of the product.

**Chronic effects:** Prolonged inhalation may be harmful. May be harmful if absorbed through skin. 2-Butoxyethanol may be absorbed through the skin in toxic amounts if contact is repeated or prolonged. Effects have not been observed in humans.

## **12. Ecological information**

**Ecotoxicity:** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability:** No data is available on the degradability of this product.

**Bioaccumulative potential:** No data available.

**Partition coefficient n-octanol/water (log Kow):** 2-Butoxyethanol 0.83          Butane 2.89

**Mobility in soil:** No data available.

**Other adverse effects:** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### **13. Disposal considerations**

**Disposal instructions:** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Waste from residues/unused products:** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### **14. Transport information**

**DOT UN number:** UN1950      **UN proper shipping name:** Aerosols, non-flammable      **Class:** 2.2  
**Subsidiary risk:** N/A      **Label(s):** 2.2      **Packing group:** Not applicable.  
**Special precautions for user:** Read safety instructions, SDS and emergency procedures before handling.  
**Packaging exceptions:** This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity.

### **15. Regulatory information**

#### **US federal regulations**

**FIFRA:** This product is a U.S. EPA Registered pesticide, EPA Reg. No. 706-65-8155, and is subject to certain labeling requirements under Federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide products.

**OSHA:** This product is a "Hazardous Chemical" under the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA:** All components are on the U.S. EPA TSCA Inventory List.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):** Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4):** Not listed.

**SARA 304 Emergency release notification:** Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):** Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA): Hazard categories**

Immediate Hazard – Yes      Delayed Hazard – No

Fire Hazard – Yes      Pressure Hazard – No

Reactivity Hazard – No

**SARA 311/312 Hazardous chemical:** No

**SARA 313 (TRI reporting):** Not regulated.

#### **Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List:** Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):** Butane (CAS 106-97-8)

**Safe Drinking Water Act (SDWA):** Not regulated.

#### **US state regulations**

**US. Massachusetts RTK - Substance List**

**US. New Jersey Worker and Community Right-to-Know Act**

**US. Pennsylvania Worker and Community Right-to-Know Law**

2-Butoxyethanol (CAS 111-76-2)      Butane (CAS 106-97-8)

**US. Rhode Island RTK**

Butane (CAS 106-97-8)

**US. California Proposition 65:** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

### **16. Other information, including date of preparation or last revision**

**Date issued:** 01. 02. 2015      **HSK-1240 Revision:** N/A

**Disclaimer** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. We cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.



## CANBERRA CORPORATION SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** HUSKY 421 GLASS, PLASTIC & SCREEN CLEANER CONCENTRATE

**Application or recommended use:** Glass and hard surface cleaner

**Restrictions on use:** Do not use in any fashion not specified on the product label.

**Manufacturer / supplier:** Canberra Corporation

3610 N. Holland-Sylvania Rd.

Toledo, Ohio 43615 USA

**Telephone:** 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

### 2. Hazards Identification

**GHS Classification:** Classification of this mixture in accordance with paragraph (d) of §1910.1200.

Eye Damage/Irritation - Category 2B

**Label elements:**

Symbol: None

Signal word: **WARNING**

Hazard statements: Causes eye irritation.

Precautionary statements: Wash hands, face and any skin contact thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Other Hazards:** None known

### 3. Composition / Information on Ingredients

**Chemical characterization:** Mixture of water, detergents, water soluble solvents and auxiliary agents.

**Hazardous ingredients:** The exact percentage of composition has been withheld as a trade secret.

5 - 10% 1-Butoxy-2-propanol CAS 5131-66-8, EINECS/ELINCS 225-878-4

1 - 3% Sodium xylene sulfonate CAS 1300-72-7, EINECS/ELICS 215-090-9

**Other ingredients (> 1%):**

> 87% Water CAS 7732-18-5, EINECS/ELINCS 231-791-2

### 4. First-Aid Measures

**Symptoms:** Irritation of affected areas. Causes eye irritation. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Inhalation:** Move person to fresh air. If respiratory irritation or dizziness occurs, seek immediate medical assistance.

**Skin Contact:** Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water. If irritation occurs, get medical advice/attention.

**Eye Contact:** Hold eye open and rinse slowly and gently with water for 5-10 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. If eye irritation persists, get medical advice/attention.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration.

**Note to Physician:** Treat exposed patients symptomatically.

### 5. Fire-Fighting Measures

**Suitable Extinguishing Media:** Use water spray, dry chemical, carbon dioxide or foam extinguishing agents. In case of fire, keep containers cooled with water spray. **Unsuitable Extinguishing Media:** High pressure water jet.

**Specific hazards in case of fire:** None known.

**Special Fire Fighting Precautions:** Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

### 6. Accidental Release Measures

**Emergency Procedures:** Depending on the extent of release, consider the need for restriction of access to spill area.

**Personal Precautions:** Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.

**Environmental Precautions:** Prevent spills from entering storm sewers/drains or contact with soil.

## **6. Accidental Release Measures (cont.)**

**Clean up Methods:** Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

## **7. Handling and Storage**

**Precautions for Safe Handling:** Read label before use. Avoid contact with eyes. Wear eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor. Do not eat, drink or smoke while using this product. Wash hands, face and any skin contact thoroughly after handling.

**Conditions for Safe Storage:** Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed original container in a cool (10° - 30°C), dry area.

**Incompatibility:** Oxidizers.

## **8. Exposure Controls / Personal Protection**

**Components with occupational exposure limits:** None

**Engineering Controls:** Proper ventilation in accordance with good industrial hygiene should be provided.

### **Personal Protective Equipment**

**Respiratory:** Respiratory protection is not necessary under normal conditions of use.

**Gloves:** Water impervious gloves (latex or neoprene rubber) recommended.

**Eye Protection:** Chemical resistant goggles recommended

**Other:** Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

## **9. Physical and Chemical Properties**

<b>Physical State</b> -	Liquid	<b>Auto-ignition temperature</b> -	Not applicable
<b>Color</b> -	Dark Turquoise	<b>Flash Point</b> -	> 200°F (ASTM D3278)
<b>Odor</b> -	Mild	<b>Flammability</b> -	No data available
<b>Odor Threshold</b> -	Not available	<b>Flammability Limits</b> -	No data available
<b>Boiling Point</b> -	212°F	<b>Partition coefficient</b> -	Not applicable
<b>Decomposition temperature</b> -	No data available	<b>Solubility (Water)</b> -	Complete
<b>Freezing Point</b> -	32°F	<b>Vapor Density</b> -	No data available
<b>pH (Neat)</b> -	8.0 - 9.0	<b>Vapor Pressure</b> -	No data available
<b>pH (RTU)</b> -	7.5 - 8.5	<b>Viscosity</b> -	Water thin
<b>Relative Density</b> -	1.000	<b>% VOC</b> -	7.8 (Excluding exempt material)
<b>Evaporation Rate</b> -	Similar to water		

## **10. Stability and Reactivity**

**Reactivity:** No specific reactivity test data is available for this mixture. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** Oxidizers.

**Chemical stability:** This product is stable at ambient temperatures and atmospheric pressures.

**Conditions to avoid:** Temperatures above 50°C or below 10°C.

**Hazardous decomposition products:** None known.

## **11. Toxicological Information**

**Acute Toxicity:** Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Irritation	Category 2B	Ingredient literature
Skin Damage/Irritation	Not applicable	Not applicable	Ingredient literature

**Summary:** Skin and eye contact are most likely routes of exposure. Causes eye irritation

### **Subchronic/Chronic Toxicity:**

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

**Summary:** Repeated or prolonged contact causes eye irritation.

**Carcinogens** - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA

**Other data** - No other toxicological information is available for this mixture.

**12. Ecological Information**

This material has not been tested for acute environmental effects.

**Persistence and degradability:** Material is not persistent. Organic components > 1% are readily biodegradable.

**Bio-accumulative potential:** No evidence to suggest bio-accumulation will occur.

**Mobility:** Accidental spillage may lead to penetration of soil and groundwater.

**13. Disposal Considerations**

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

**14. Transport Information**

**Proper Shipping Name:** Not regulated **RQ - Not Applicable**

**Shipping emergency phone:** 800-424-9300

**Transport hazard class:** Not Applicable **Hazard Label:** Not Applicable

**Packing Group:** Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

**15. Regulatory Information**

**Inventory status:** All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

**OSHA Hazard Communication Standard:** This product meets the §1910.1200 definition of a "Hazardous Chemical".

**Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312**

**Immediate (Acute) Health Hazard** Yes **Delayed (Chronic) Health Hazard** No

**Fire Hazard** No **Reactive Hazard** No

**Sudden Release of Pressure Hazard** No

**Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313**

\*Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

**Pennsylvania/New Jersey/Massachusetts Right to Know**

See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1% (w/w).

**California Proposition 65:** This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**16. Other information**

**Date issued:** 31. 12. 2014

F421-GS1 Revision: N/A

**Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document.** The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation



## CANBERRA CORPORATION SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** HUSKY 445 FLEETWASH & PRESSURE SPRAYER CONCENTRATE

**Application or recommended use:** Hard surface spray cleaner/degreaser

**Restrictions on use:** Do not use in any fashion not specified on the product label.

**Manufacturer / supplier:** Canberra Corporation

3610 N. Holland-Sylvania Rd.

Toledo, Ohio 43615 USA

**Telephone:** 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

### 2. Hazards Identification

**GHS Classification:** Classification of this mixture in accordance with paragraph (d) of §1910.1200.

Skin Corrosion/Irritation - Category 2

Eye Damage/Irritation - Category 1

#### Label Elements:



Symbol:

Signal word:

**DANGER**

Hazard statements:

Causes skin irritation.

Causes serious eye damage.

Precautionary statements: Wash hands, face and any skin contact thoroughly after handling.

Wear protective gloves/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **Immediately call a POISON CENTER or doctor/physician.**

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

See 4. First-Aid Measures for specific treatment.

#### Other Hazards:

Harmful if swallowed.

### 3. Composition / Information on Ingredients

**Chemical characterization:** Mixture of water, alkalis, detergents and auxiliary agents.

**Hazardous ingredients:** The exact percentage of composition has been withheld as a trade secret.

1 - 5% Tetrasodium EDTA CAS 64-02-8, EINECS/ELINCS 200-573-9

1 - 5% C<sub>9-11</sub> Alcohol ethoxylate CAS 68439-46-3, EINECS/ELINCS NLP

1 - 5% PEG-15 Cocomonium chloride CAS 61791-10-4, EINECS/ELINCS NLP

1 - 2% Sodium metasilicate.5H<sub>2</sub>O CAS 6834-92-0, EINECS/ELINCS 229-912-9

#### Other ingredients (> 1%):

> 85% Water CAS 7732-18-5, EINECS/ELINCS 231-791-2

### 4. First-Aid Measures

**Symptoms:** Irritation of affected areas. Causes skin irritation and serious eye damage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Inhalation:** Move person to fresh air. If respiratory irritation or dizziness occurs, seek immediate medical assistance.

**Skin Contact:** Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. If irritation occurs, get medical advice/attention.

**Eye Contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Immediately call a Poison Center or doctor/physician.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration.

**Note to Physician:** Treat exposed patients symptomatically.



## 5. Fire-Fighting Measures

**Suitable Extinguishing Media:** Not applicable. Product is not a fire hazard.

**Unsuitable Extinguishing Media:** High pressure water jet. **Specific hazards in case of fire:** None known.

**Special Fire Fighting Precautions:** Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

## 6. Accidental Release Measures

**Emergency Procedures:** Depending on the extent of release, consider the need for restriction of access to spill area.

**Personal Precautions:** Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.

**Environmental Precautions:** Prevent spills from entering storm sewers/drains or contact with soil.

**Clean up Methods:** Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

## 7. Handling and Storage

**Precautions for Safe Handling:** Read label before use. Avoid contact with skin or eyes. Wash hands, face and any skin contact thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor.

**Conditions for Safe Storage:** Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed, original container in a cool (10° - 30°C), dry area.

**Incompatibility:** None known.

## 8. Exposure Controls / Personal Protection

**Components with occupational exposure limits:** None

**Engineering Controls:** Proper ventilation in accordance with good industrial hygiene should be provided.

### **Personal Protective Equipment**

**Respiratory:** Respiratory protection is not necessary under normal conditions of use.

**Gloves:** Use water impervious gloves (latex or neoprene rubber). No breakthrough time has been established.

**Eye Protection:** Chemical resistant goggles or face protection.

**Other:** Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

## 9. Physical and Chemical Properties

<b>Physical State</b> -	Liquid	<b>Auto-ignition temperature</b> -	Not applicable
<b>Color</b> -	None	<b>Flash Point</b> -	None
<b>Odor</b> -	Detergent	<b>Flammability</b> -	Not applicable
<b>Odor Threshold</b> -	No data available	<b>Flammability Limits</b> -	Not applicable
<b>Boiling Point</b> -	212°F	<b>Partition coefficient</b> -	Not applicable
<b>Decomposition temperature</b> -	No data available	<b>Solubility (Water)</b> -	Complete
<b>Freezing Point</b> -	32°F	<b>Vapor Density</b> -	No data available
<b>pH (Neat)</b> -	12.4 - 12.9	<b>Vapor Pressure</b> -	No data available
<b>pH (RTU)</b> -	11.9 - 12.5	<b>Viscosity</b> -	Water thin
<b>Relative Density</b> -	1.020	<b>% VOC</b> -	< 0.5 (Excluding exempt material)
<b>Evaporation Rate</b> -	Similar to water		

## 10. Stability and Reactivity

**Reactivity:** No specific reactivity test data is available for this mixture. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** Oxidizers.

**Chemical stability:** This product is stable at ambient temperatures and pressures.

**Conditions to avoid:** Temperatures above 50°C or below 10°C.

**Hazardous decomposition products:** None known.

## 11. Toxicological Information

**Acute Toxicity:** Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Corrosion	Category 1	Ingredient literature
Skin Damage/Irritation	Irritation	Category 2	Ingredient literature

**Summary:** Skin and eye contact are most likely routes of exposure. Exposure causes skin irritation and serious eye damage.

**11. Toxicological Information (cont.)****Subchronic/Chronic Toxicity:**

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

**Summary:** Repeated or prolonged contact causes skin irritation and serious eye damage.

**Carcinogens** - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA

**Other data** - No other toxicological information is available for this mixture.

**12. Ecological Information**

This material has not been tested for acute environmental effects.

**Persistence and degradability:** Material is not persistent. All organic components > 1% are readily biodegradable.

**Bio-accumulative potential:** No evidence to suggest bio-accumulation will occur.

**Mobility:** Accidental spillage may lead to penetration of soil and groundwater.

**13. Disposal Considerations**

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

**14. Transport Information**

**Proper Shipping Name:** Not regulated **RQ** - Not Applicable

**Shipping emergency phone:** 800-424-9300

**Transport hazard class:** Not Applicable **Hazard Label:** Not Applicable

**Packing Group:** Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

**15. Regulatory Information**

**Inventory status:** All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

**OSHA Hazard Communication Standard:** This product meets the §1910.1200 definition of a "Hazardous Chemical".

**Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312**

<b>Immediate (Acute) Health Hazard</b>	Yes	<b>Delayed (Chronic) Health Hazard</b>	No
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<b>Fire Hazard</b>	No	<b>Reactive Hazard</b>	No
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<b>Sudden Release of Pressure Hazard</b>	No
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**Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313**

\*Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

**Pennsylvania/New Jersey/Massachusetts Right to Know**

See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1% (w/w).

**California Proposition 65:** This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**16. Other information**

**Date issued:** 31. 12. 2014

F445-001 Revision: N/A

**Disclaimer:** No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation



## CANBERRA CORPORATION SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** HUSKY 710 FLOOR CLEANER & NEUTRALIZER

**Application or recommended use:** Acidic tile floor cleaner/neutralizer

**Restrictions on use:** Do not use in any fashion not specified on the product label.

**Manufacturer / supplier:** Canberra Corporation

3610 N. Holland-Sylvania Rd.

Toledo, Ohio 43615 USA

**Telephone:** 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

### 2. Hazards Identification

**GHS Classification:** Classification of this mixture in accordance with paragraph (d) of §1910.1200.

Skin Corrosion/Irritation - Category 2

Eye Damage/Irritation - Category 1

**Label Elements:**



Symbol:

Signal word:

**DANGER**

Hazard statements:

Causes skin irritation.

Causes serious eye damage.

Precautionary statements: Wash hands, face and any skin contact thoroughly after handling.

Wear protective gloves/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Immediately call a POISON CENTER or doctor/physician.**

See 4. First-Aid Measures for specific treatment.

**Other Hazards:**

Harmful if swallowed.

### 3. Composition / Information on Ingredients

**Chemical characterization:** Glycolic acid solution, blended with detergents, organic acids and auxiliary agents.

**Hazardous ingredients:** The exact percentage of composition has been withheld as a trade secret.

1 - 5% Glycolic Acid, CAS 79-14-1, EINECS/ELINCS 201-180-5

1 - 3% C<sub>12-15</sub> Fatty alcohol ethoxylate CAS 68131-39-5, EINECS/ELINCS NLP500-195-7

**Other ingredients (> 1%):**

> 84% Water CAS 7732-18-5, EINECS/ELINCS 231-791-2

### 4. First-Aid Measures

**Symptoms:** Causes irritation or burning sensation. Causes skin irritation and serious eye damage.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Inhalation:** Move person to fresh air. If respiratory irritation or dizziness occurs, seek immediate medical assistance.

**Skin Contact:** Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Eye Contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration. Probable mucosal damage may contraindicate the use of gastric lavage.

**Note to Physician:** Treat exposed patients symptomatically.

## **5. Fire-Fighting Measures**

**Suitable Extinguishing Media:** Use water spray, dry chemical, carbon dioxide or foam extinguishing agents. In case of fire, keep containers cooled with water spray.

**Unsuitable Extinguishing Media:** High pressure water jet.

**Specific hazards in case of fire:** None known.

**Special Fire Fighting Precautions:** Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

## **6. Accidental Release Measures**

**Emergency Procedures:** Depending on the extent of release, consider the need for restriction of access to spill area.

**Personal Precautions:** Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.

**Environmental Precautions:** Prevent spills from entering storm sewers/drains or contact with soil.

**Clean up Methods:** Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

## **7. Handling and Storage**

**Precautions for Safe Handling:** Do not use on any surface that can be damaged by acid materials. Wash hands, face and any skin contact thoroughly after handling. Wear protective gloves, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor.

**Conditions for Safe Storage:** Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed, original container in a cool (10° - 30°C), dry area.

**Incompatibility:** Alkali, oxidizers.

## **8. Exposure Controls / Personal Protection**

**Components with occupational exposure limits:** None

**Engineering Controls:** Proper ventilation in accordance with good industrial hygiene should be provided.

### **Personal Protective Equipment**

**Respiratory:** Respiratory protection is not necessary under normal conditions of use.

**Gloves:** Use water impervious gloves (latex or neoprene rubber). No breakthrough time has been established.

**Eye Protection:** Chemical resistant goggles and face protection.

**Other:** Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

## **9. Physical and Chemical Properties**

Physical State -	Liquid	<b>Auto-ignition temperature</b> -	Not applicable
Color -	Green	<b>Flash Point</b> -	None
Odor -	Lime	<b>Flammability</b> -	Not applicable
Odor Threshold -	No data available	<b>Flammability Limits</b> -	Not applicable
Boiling Point -	212°F	<b>Partition coefficient</b> -	Not applicable
Decomposition temperature -	No data available	<b>Solubility (Water)</b> -	Complete
Freezing Point -	0°F	<b>Vapor Density</b> -	No data available
pH (Neat) -	2.5	<b>Vapor Pressure</b> -	No data available
pH (RTU) -	2.5 - 3.5	<b>Viscosity</b> -	Water thin
Relative Density -	1.025	<b>% VOC</b> -	< 1 (Excluding LVP material)
Evaporation Rate -	Similar to water		

## **10. Stability and Reactivity**

**Reactivity:** No specific reactivity test data is available. Under normal conditions of storage and use, hazardous reactions are not expected.

**Incompatible materials:** Oxidizers, metal hydroxides.

**Chemical stability:** This product is stable at ambient temperatures and pressures.

**Conditions to avoid:** Temperatures above 50°C or below 10°C.

**Hazardous decomposition products:** None known.

## **11. Toxicological Information**

**Acute Toxicity:** Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Corrosion	Category 1	Ingredient literature
Skin Damage/Irritation	Corrosion	Category 2	Ingredient literature

**Summary:** Skin and eye contact are most likely routes of exposure. Exposure causes skin irritation and serious eye damage.

**Version:** 001 **Date issued:** 31. 12. 2014

**Revision Date:** N/A

Page 2 of 3

**11. Toxicological Information (cont.)****Subchronic/Chronic Toxicity:**

Test	Results	Classification	Basis
Skin Sensitization	Not a sensitizer	Not applicable	Ingredient literature.

**Summary:** Repeated or prolonged contact causes skin irritation and eye damage.

**Carcinogens** - Ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA

**Other data** - No other toxicological information is available for this mixture.

**12. Ecological Information**

This material has not been tested for acute environmental effects.

**Persistence and degradability:** Material is not persistent. All organic components > 1% are readily biodegradable.

**Bio-accumulative potential:** No evidence to suggest bio-accumulation will occur.

**Mobility:** Accidental spillage may lead to penetration of soil and groundwater. However, due to degradability, no evidence suggests this would cause adverse ecological effects. Material will lower pH of affected area.

**13. Disposal Considerations**

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

**14. Transport Information**

**Proper Shipping Name:** Not regulated **RQ** - Not Applicable

**Shipping emergency phone:** 800-424-9300

**Transport hazard class:** Not Applicable **Hazard Label:** Not Applicable

**Packing Group:** Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

**15. Regulatory Information**

**Inventory status:** All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

**OSHA Hazard Communication Standard:** This product meets the §1910.1200 definition of a "Hazardous Chemical".

**Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312**

<b>Immediate (Acute) Health Hazard</b>	Yes	<b>Delayed (Chronic) Health Hazard</b>	No
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<b>Fire Hazard</b>	No	<b>Reactive Hazard</b>	No
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<b>Sudden Release of Pressure Hazard</b>	No
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**Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313**

\*Chemicals marked with an asterisk in "**3. Composition/Information on Ingredients**" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

**Pennsylvania/New Jersey/Massachusetts Right to Know**

See "**3. Composition/Information on Ingredients**" for hazardous and top five ingredients over 1% (w/w).

**California Proposition 65:** This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**16. Other information**

**Date issued:** 31. 12. 2014

F710-001 Revision: N/A

**Disclaimer:** No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation



## CANBERRA CORPORATION SAFETY DATA SHEET

### 1. Identification

**Product Identifier:** HUSKY OXY/ORANGE 907 O/O CONC. MULTI-PURPOSE CLEANER & DEGREASER

**Application or recommended use:** Industrial hard surface cleaner/degreaser

**Restrictions on use:** Do not use in any fashion not specified on the product label.

**Manufacturer / supplier:** Canberra Corporation

3610 N. Holland-Sylvania Rd.

Toledo, Ohio 43615 USA

**Telephone:** 419-841-6616 **Emergency phone:** 800-832-8992 **National Poison Center:** 800-222-1222

### 2. Hazards Identification

**GHS Classification:** Classification of this mixture in accordance with paragraph (d) of §1910.1200.

Skin Corrosion/Irritation - Category 2

Skin Sensitizer - Category 1B

Eye Damage/Irritation - Category 1

Flammable Liquid - Category 3

#### Label Elements:



Symbol:

Signal word:

**DANGER**

Hazard statements:

Causes skin irritation. May cause allergic skin reaction.

Causes serious eye damage. Flammable liquid and vapor

Precautionary statements: Avoid breathing mist/vapors/spray.

Wash hands, face and any skin contact thoroughly after handling.

Wear protective gloves/eye protection/face protection.

Contaminated work clothing must not be allowed out of the workplace.

Keep away from heat, sparks, open flames and hot surfaces. – No smoking.

Keep container tightly closed. Ground container and receiving equipment.

Use explosion proof electrical equipment. Use non-sparking tools.

Take precautionary measures against static discharge.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **Immediately call a POISON CENTER or doctor/physician.**

IF ON SKIN (or Hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

See 4. First-Aid Measures for specific treatment.

In case of fire: Use foam or water spray to extinguish. Store in a cool well-ventilated place.

Dispose of contents/container to an approved disposal facility.

#### Other Hazards:

Harmful if swallowed.

### 3. Composition / Information on Ingredients

**Chemical characterization:** Mixture of water, detergents, water soluble solvents, d-limonene and hydrogen peroxide.

**Hazardous ingredients:** The exact percentage of composition has been withheld as a trade secret.

5 - 10% Potassium dodecylbenzyl sulfonate CAS 27177-77-1, EINECS/ELINCS 248-296-2

5 - 10% C<sub>12-15</sub> Alcohol ethoxylate CAS 68131-39-5, EINECS/ELINCS NLP 500-195-7

5 - 10% d-Limonene CAS 5989-27-5, EINECS/ELINCS 227-813-5

5 - 10% Dipropylene glycol methyl ether CAS 34590-94-8, EINECS/ELINCS 252-104-2

1 - 5% Hydrogen peroxide CAS 7722-84-1, EINECS/ELINCS 231-765-0

#### Other ingredients (> 1%):

> 60% Water CAS 7732-18-5, EINECS/ELINCS 231-791-2

### 4. First-Aid Measures

**Symptoms:** Irritation of affected areas. Causes skin irritation and serious eye damage. May cause allergic skin reaction.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Inhalation:** Move person to fresh air. If respiratory irritation or dizziness occurs, seek immediate medical assistance.

#### **4. First-Aid Measures (cont.)**

**Skin Contact:** Remove contaminated clothing and wash before reuse. Wash contaminated area with soap and water. If irritation or rash occurs, get medical advice/attention.

**Eye Contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Immediately call a Poison Center or doctor/physician.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to a person who is unconscious or convulsing. If vomiting occurs, keep head below hips to reduce risk of aspiration. Probable mucosal damage may contraindicate the use of gastric lavage.

**Note to Physician:** Treat exposed patients symptomatically.

#### **5. Fire-Fighting Measures**

**Suitable Extinguishing Media:** Use water spray, dry chemical, carbon dioxide or foam extinguishing agents. In case of fire, keep containers cooled with water spray.

**Unsuitable Extinguishing Media:** High pressure water jet. **Specific hazards in case of fire:** None known.

**Special Fire Fighting Precautions:** Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing.

#### **6. Accidental Release Measures**

**Emergency Procedures:** Depending on the extent of release, consider the need for restriction of access to spill area.

**Personal Precautions:** Do not eat, drink or smoke during clean up. Wear protective clothing, eye protection and impervious gloves (e.g. neoprene). Wash thoroughly after clean up.

**Environmental Precautions:** Prevent spills from entering storm sewers/drains or contact with soil.

**Clean up Methods:** Small spills may be wiped up and rinsed with water. For larger spills, contain spill with inert material (sand, clay). Transfer material to labeled containers for recovery or proper disposal. After removal, flush area with water. Follow good industrial hygiene practices.

#### **7. Handling and Storage**

**Precautions for Safe Handling:** Read label before use. Avoid contact with skin or eyes. Do not breathe mist/vapors/spray. Wash hands, face and any skin contact thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, eye protection, face protection. Use product only according to label directions. If unsure about safe use, contact your supervisor.

**Conditions for Safe Storage:** Keep out of reach of children. Do not contaminate water, food or feed by storage and disposal. Store in tightly closed, original container in a cool (10° - 30°C), dry, well-ventilated area.

**Incompatibility:** None known.

#### **8. Exposure Controls / Personal Protection**

**Components with occupational exposure limits:**

Component	Reference	TWA (8 hr)	PEL (8 hr)	STEL
Dipropylene glycol methyl ether	ACGIH	100 ppm (skin)		150 ppm (skin)
	OSHA		100 ppm (skin)	
d-Limonene	AIHA	30 ppm		

**Engineering Controls:** Proper ventilation in accordance with good industrial hygiene should be provided.

**Personal Protective Equipment**

**Respiratory:** Respiratory protection is not necessary under normal conditions of use.

**Gloves:** Use water impervious gloves (latex or neoprene rubber). No breakthrough time has been established.

**Eye Protection:** Chemical resistant goggles or face protection.

**Other:** Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

#### **9. Physical and Chemical Properties**

**Physical State** - Liquid

**Color** - None

**Odor** - d-Limonene

**Odor Threshold** - No data available

**Boiling Point** - 212°F

**Decomposition temperature** - No data available

**Freezing Point** - 32°F

**pH (Neat)** - 3 - 5

**pH (Neat)** - 4 - 6

**Relative Density** - 1.030

**Evaporation Rate** - Similar to water

**Auto-ignition temperature** - Not applicable

**Flash Point** - 136°F (ASTM D3278)

**Flammability** - Not applicable

**Flammability Limits** - Not applicable

**Partition coefficient** - Not applicable

**Solubility (Water)** - Complete

**Vapor Density** - No data available

**Vapor Pressure** - No data available

**Viscosity** - Water thin

**% VOC** - 11.5 (Excluding exempt material)

## **10. Stability and Reactivity**

**Reactivity:** No specific reactivity test data is available for this mixture. Under normal conditions of storage and use, hazardous reactions are not expected. **Incompatible materials:** None known.

**Chemical stability:** This product is stable at ambient temperatures and atmospheric pressures.

**Conditions to avoid:** Temperatures above 50°C or below 10°C.

**Hazardous decomposition products:** None known.

## **11. Toxicological Information**

**Acute Toxicity:** Toxicity data is not available for this mixture. Data below are estimates based on summation methods.

Test	Results	Classification (A.0.4.1(c))	Basis (A.1.3.6.1)
Oral	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Dermal	> 2000mg/kg	Not applicable	Ingredient literature (Additive formula)
Inhalation	> 20 mg/L	Not applicable	Ingredient literature (Additive formula)
Eye Damage/Irritation	Corrosion	Category 1	Ingredient literature
Skin Damage/Irritation	Irritation	Category 2	Ingredient literature

**Summary:** Skin and eye contact are most likely routes of exposure. Exposure causes skin irritation and serious eye damage.

### **Subchronic/Chronic Toxicity:**

Test	Results	Classification	Basis
Skin Sensitization	d-Limonene acts as a skin sensitizer	Sensitizer 1B	Ingredient literature.

**Summary:** Repeated or prolonged contact causes skin irritation and serious eye damage; may cause allergic skin reaction.

**Carcinogens** - Hydrogen peroxide – IARC, ACGIH listed A3 as animal carcinogen. All other ingredients are not listed on the NTP Report on Carcinogens, IARC Monographs or by OSHA

**Other data** - No other toxicological information is available for this mixture.

## **12. Ecological Information**

This material has not been tested for acute environmental effects.

**Persistence and degradability:** Material is not persistent. All organic components > 1% are readily biodegradable.

**Bio-accumulative potential:** No evidence to suggest bio-accumulation will occur.

**Mobility:** Accidental spillage may lead to penetration of soil and groundwater.

## **13. Disposal Considerations**

Do not contaminate water, food or feed by disposal. If these materials cannot be disposed of by use according to label directions, contact your State Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance. Rinse container promptly after emptying. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If container is one gallon or less, wrap empty container in plastic bag and discard in trash.

## **14. Transport Information**

**Proper Shipping Name:** Not regulated **RQ** - Not Applicable

**Shipping emergency phone:** 800-424-9300

**Transport hazard class:** Not Applicable **Hazard Label:** Not Applicable

**Packing Group:** Not Applicable **Emergency Guide No.:** Not Applicable **Marine Pollutant:** No

## **15. Regulatory Information**

**Inventory status:** All components are listed on TSCA(US), EINECS/ELINCS(EU), DSL(Canada), AICS(Australia), ENCS(Japan).

**OSHA Hazard Communication Standard:** This product meets the §1910.1200 definition of a "Hazardous Chemical".

### **Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Sections 311 and 312**

**Immediate (Acute) Health Hazard** Yes **Delayed (Chronic) Health Hazard** No

**Fire Hazard** Yes **Reactive Hazard** No

**Sudden Release of Pressure Hazard** No

### **Superfund Amendments and Reauthorization Act of 1986 Title III (EPCRA) Section 313**

\*Chemicals marked with an asterisk in "3. Composition/Information on Ingredients" are subject to reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40CFR Part 372.

### **Pennsylvania/New Jersey/Massachusetts Right to Know**

See "3. Composition/Information on Ingredients" for hazardous and top five ingredients over 1% (w/w).

**California Proposition 65:** This product does not contain a listed substance known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.



**16. Other information****Date issued:** 31. 12. 2014

F907-001

**Revision:** 15. 01. 2018 Version: 002

Updated CAS number in Composition / Information on Ingredients

**Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document.** The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. **Prepared by:** R&D, Canberra Corporation

# SAFETY DATA SHEET

7347

## Section 1. Identification

**Product name** : KRYLON® CONTRACTOR® Water-Based Striping Paint  
Athletic Field Blue

**Product code** : 7347

**Other means of identification** : Not available.

**CAS #** : Not applicable.

**Product type** : Aerosol.

**Relevant identified uses of the substance or mixture and uses advised against**

Not applicable.

**Manufacturer** : Krylon Products Group  
101 Prospect Avenue NW  
Cleveland, OH 44115

**National contact** : KRYLON PRODUCTS GROUP  
180 Brunel Road  
Mississauga, Ontario L4Z 1T5 Canada

**Emergency telephone number of the company** : US / Canada: (216) 566-2917  
Mexico: SETIQ 01-800-00-214-00 / D.F. 5559-1588 24 hours / 365 days a year

**Product Information Telephone Number** : US / Canada: (800) 457-9566  
Mexico: Not Available

**Regulatory Information Telephone Number** : US / Canada: (216) 566-2902  
Mexico: Not Available

**Transportation Emergency Telephone Number** : US / Canada: (800) 424-9300  
Mexico: SETIQ 01-800-00-214-00 / D.F. 5559-1588 24 hours / 365 days a year

## Section 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Fertility) - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 28.1%

**GHS label elements**

**Date of issue/Date of revision** : 4/18/2017 **Date of previous issue** : 3/13/2017 **Version** : 2.02 1/17

## Section 2. Hazards identification

**Hazard pictograms**



**Signal word**

: Danger

**Hazard statements**

: Extremely flammable aerosol.  
Contains gas under pressure; may explode if heated.  
Causes serious eye irritation.  
Causes skin irritation.  
Suspected of damaging fertility or the unborn child.  
Suspected of causing cancer.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

**General**

: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention**

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

**Response**

: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Storage**

: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

**Disposal**

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements**

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

**Hazards not otherwise classified**

: DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture  
**Other means of identification** : Not available.

### CAS number/other identifiers

Ingredient name	% by weight	CAS number
Propane	14.4	74-98-6
Toluene	10.56	108-88-3
Hexane	7.55	110-54-3
Lt. Aliphatic Hydrocarbon Solvent	6.61	64742-89-8
2-Methylpentane	3.5	107-83-5
3-Methylpentane	1.3	96-14-0
Xylene	1.25	1330-20-7
2,3-Dimethylbutane	1.1	79-29-8
Titanium Dioxide	0.58	13463-67-7
Ethylbenzene	0.22	100-41-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.

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## Section 4. First aid measures

**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

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## Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is

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## Section 7. Handling and storage

inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

### Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### Conditions for safe storage, including any incompatibilities

: Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Propane	<p><b>NIOSH REL (United States, 10/2013).</b>                      TWA: 1000 ppm 10 hours.                      TWA: 1800 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>                      TWA: 1000 ppm 8 hours.                      TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Toluene	<p><b>OSHA PEL Z2 (United States, 2/2013).</b>                      TWA: 200 ppm 8 hours.                      CEIL: 300 ppm                      AMP: 500 ppm 10 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b>                      TWA: 100 ppm 10 hours.                      TWA: 375 mg/m<sup>3</sup> 10 hours.                      STEL: 150 ppm 15 minutes.                      STEL: 560 mg/m<sup>3</sup> 15 minutes.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>                      TWA: 20 ppm 8 hours.</p>
Hexane	<p><b>ACGIH TLV (United States, 3/2016).</b>  <b>Absorbed through skin.</b>                      TWA: 50 ppm 8 hours.</p> <p><b>NIOSH REL (United States, 10/2013).</b>                      TWA: 50 ppm 10 hours.                      TWA: 180 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>                      TWA: 500 ppm 8 hours.                      TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Lt. Aliphatic Hydrocarbon Solvent 2-Methylpentane	<p>None.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>                      TWA: 500 ppm 8 hours.                      TWA: 1760 mg/m<sup>3</sup> 8 hours.                      STEL: 1000 ppm 15 minutes.                      STEL: 3500 mg/m<sup>3</sup> 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b>                      TWA: 100 ppm 10 hours.                      TWA: 350 mg/m<sup>3</sup> 10 hours.                      CEIL: 510 ppm 15 minutes.                      CEIL: 1800 mg/m<sup>3</sup> 15 minutes.</p>

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## Section 8. Exposure controls/personal protection

3-Methylpentane	<p><b>ACGIH TLV (United States, 3/2016).</b>  TWA: 500 ppm 8 hours.  TWA: 1760 mg/m<sup>3</sup> 8 hours.  STEL: 1000 ppm 15 minutes.  STEL: 3500 mg/m<sup>3</sup> 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b>  TWA: 100 ppm 10 hours.  TWA: 350 mg/m<sup>3</sup> 10 hours.  CEIL: 510 ppm 15 minutes.  CEIL: 1800 mg/m<sup>3</sup> 15 minutes.</p>
Xylene	<p><b>ACGIH TLV (United States, 3/2016).</b>  TWA: 100 ppm 8 hours.  TWA: 434 mg/m<sup>3</sup> 8 hours.  STEL: 150 ppm 15 minutes.  STEL: 651 mg/m<sup>3</sup> 15 minutes.</p> <p><b>OSHA PEL (United States, 6/2016).</b>  TWA: 100 ppm 8 hours.  TWA: 435 mg/m<sup>3</sup> 8 hours.</p>
2,3-Dimethylbutane	<p><b>ACGIH TLV (United States, 3/2016).</b>  TWA: 500 ppm 8 hours.  TWA: 1760 mg/m<sup>3</sup> 8 hours.  STEL: 1000 ppm 15 minutes.  STEL: 3500 mg/m<sup>3</sup> 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b>  TWA: 100 ppm 10 hours.  TWA: 350 mg/m<sup>3</sup> 10 hours.  CEIL: 510 ppm 15 minutes.  CEIL: 1800 mg/m<sup>3</sup> 15 minutes.</p>
Titanium Dioxide	<p><b>ACGIH TLV (United States, 3/2016).</b>  TWA: 10 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>  TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>
Ethylbenzene	<p><b>ACGIH TLV (United States, 3/2016).</b>  TWA: 20 ppm 8 hours.</p> <p><b>NIOSH REL (United States, 10/2013).</b>  TWA: 100 ppm 10 hours.  TWA: 435 mg/m<sup>3</sup> 10 hours.  STEL: 125 ppm 15 minutes.  STEL: 545 mg/m<sup>3</sup> 15 minutes.</p> <p><b>OSHA PEL (United States, 6/2016).</b>  TWA: 100 ppm 8 hours.  TWA: 435 mg/m<sup>3</sup> 8 hours.</p>

### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
Propane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  8 hrs OEL: 1000 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 5/2015).</b>  TWA: 1000 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>  TWAEV: 1000 ppm 8 hours.  TWAEV: 1800 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>  TWA: 1000 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>  STEL: 1250 ppm 15 minutes.</p>



## Section 8. Exposure controls/personal protection

Toluene	<p>TWA: 1000 ppm 8 hours.</p> <p><b>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.</b>              8 hrs OEL: 50 ppm 8 hours.              8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 5/2015).</b>              TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>              TWA: 20 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014). Absorbed through skin.</b>              TWAEV: 50 ppm 8 hours.              TWAEV: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b>              STEL: 60 ppm 15 minutes.              TWA: 50 ppm 8 hours.</p>
Hexane	<p><b>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.</b>              8 hrs OEL: 50 ppm 8 hours.              8 hrs OEL: 176 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 5/2015). Absorbed through skin.</b>              TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015). Absorbed through skin.</b>              TWA: 50 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014). Absorbed through skin.</b>              TWAEV: 50 ppm 8 hours.              TWAEV: 176 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b>              STEL: 62.5 ppm 15 minutes.              TWA: 50 ppm 8 hours.</p>

### Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
Propane	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>              LMPE-PPT: 1000 ppm 8 hours.</p>
Toluene	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>              LMPE-PPT: 20 ppm 8 hours.</p>
Hexane	<p><b>NOM-010-STPS (Mexico, 4/2016). Absorbed through skin.</b>              LMPE-PPT: 50 ppm 8 hours.</p>
2-Methylpentane	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>              LMPE-CT: 1000 ppm 15 minutes.              LMPE-PPT: 500 ppm 8 hours.</p>
3-Methylpentane	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>              LMPE-CT: 1000 ppm 15 minutes.              LMPE-PPT: 500 ppm 8 hours.</p>
Xylene	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>              LMPE-CT: 150 ppm 15 minutes.              LMPE-PPT: 100 ppm 8 hours.</p>
2,3-Dimethylbutane	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>              LMPE-CT: 1000 ppm 15 minutes.</p>

## Section 8. Exposure controls/personal protection

LMPE-PPT: 500 ppm 8 hours.

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 9.1 (butyl acetate = 1)

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## Section 9. Physical and chemical properties

<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Lower: 0.9% Upper: 9.5%
<b>Vapor pressure</b>	: 101.3 kPa (760 mm Hg) [at 20°C]
<b>Vapor density</b>	: 1 [Air = 1]
<b>Relative density</b>	: 0.85
<b>Solubility</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (40°C (104°F)): <0.205 cm <sup>2</sup> /s (<20.5 cSt)
<b>Molecular weight</b>	: Not applicable.
<b>Aerosol product</b>	
Type of aerosol	: Spray
Heat of combustion	: 19.83 kJ/g

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame).
<b>Incompatible materials</b>	: No specific data.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Hexane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LD50 Oral	Rat	15840 mg/kg	-
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

#### Irritation/Corrosion

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## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild irritant	Pig	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 250 microliters	-
	Skin - Moderate irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Hexane	Eyes - Mild irritant	Rabbit	-	500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	24 hours 5 milligrams	-
	Skin - Moderate irritant	Rabbit	-	8 hours 60 microliters	-
Xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Skin - Mild irritant	Human	-	72 hours 300 Micrograms	-
Titanium Dioxide	Skin - Moderate irritant	Rabbit	-	Intermittent	-
	Skin - Mild irritant	Human	-	500 milligrams	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	24 hours 15 milligrams	-
	Skin - Mild irritant	Rabbit	-		-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Xylene	-	3	-
Titanium Dioxide	-	2B	-
Ethylbenzene	-	2B	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Hexane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2-Methylpentane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
3-Methylpentane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
2,3-Dimethylbutane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Propane	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined
Hexane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
2-Methylpentane	Category 2	Not determined	Not determined
3-Methylpentane	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
2,3-Dimethylbutane	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1
Hexane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
2-Methylpentane	ASPIRATION HAZARD - Category 1
3-Methylpentane	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
2,3-Dimethylbutane	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Eye contact** : Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness
- Inhalation** : Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - nausea or vomiting
  - headache
  - drowsiness/fatigue
  - dizziness/vertigo
  - unconsciousness
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
  - irritation
  - redness
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
  - nausea or vomiting
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Long term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.

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<b>Teratogenicity</b>	: Suspected of damaging the unborn child.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: Suspected of damaging fertility.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	4254.2 mg/kg
Inhalation (gases)	287196.6 ppm

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
Hexane Lt. Aliphatic Hydrocarbon Solvent Xylene	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 2500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
Titanium Dioxide Ethylbenzene	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	low
Hexane	-	501.187	high
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Xylene	-	8.1 to 25.9	low

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## Section 12. Ecological information

### Mobility in soil






Soil/water partition coefficient ( $K_{oc}$ ) : Not available.

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).  <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules (EmS)</b> F-D, S-U

**Special precautions for user** : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

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## Section 14. Transport information

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

**Proper shipping name** : Not available.  
**Ship type** : Not available.  
**Pollution category** : Not available.

## Section 15. Regulatory information

### SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

### California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.**

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

### History

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## Section 16. Other information

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

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# SAFETY DATA SHEET

1944

## Section 1. Identification

**Product name** : KRYLON® Farm & Implement Paint (Aerosol)  
New Equipment CAT Yellow

**Product code** : 1944

**Other means of identification** : Not available.

**CAS #** : Not applicable.

**Product type** : Aerosol.

**Relevant identified uses of the substance or mixture and uses advised against**  
Not applicable.

**Manufacturer** : Krylon Products Group  
101 Prospect Avenue NW  
Cleveland, OH 44115

**Emergency telephone number of the company** : US / Canada: (216) 566-2917  
Mexico: SETIQ 01-800-00-214-00 / D.F. 5559-1588 24 hours / 365 days a year

**Product Information Telephone Number** : US / Canada: (800) 457-9566  
Mexico: Not Available

**Regulatory Information Telephone Number** : US / Canada: (216) 566-2902  
Mexico: Not Available

**Transportation Emergency Telephone Number** : US / Canada: (800) 424-9300  
Mexico: SETIQ 01-800-00-214-00 / D.F. 5559-1588 24 hours / 365 days a year

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 32.8%

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

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## Section 2. Hazards identification

- Hazard statements** : Extremely flammable aerosol.  
Contains gas under pressure; may explode if heated.  
Causes serious eye irritation.  
Suspected of damaging the unborn child.  
Suspected of causing cancer.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.
- Precautionary statements**
- General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
- Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.  
Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
- Hazards not otherwise classified** : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

### CAS number/other identifiers

Ingredient name	% by weight	CAS number
Acetone	32	67-64-1
Propane	17	74-98-6
Lt. Aliphatic Hydrocarbon Solvent	13.19	64742-89-8
Butane	8	106-97-8
Toluene	6.35	108-88-3
Ethyl 3-Ethoxypropionate	4	763-69-9
Titanium Dioxide	1.08	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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## Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
sulfur oxides  
phosphorus oxides  
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Acetone	<p><b>ACGIH TLV (United States, 3/2016).</b> TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b> TWA: 250 ppm 10 hours. TWA: 590 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b> TWA: 1000 ppm 8 hours. TWA: 2400 mg/m<sup>3</sup> 8 hours.</p>
Propane	<p><b>NIOSH REL (United States, 10/2013).</b> TWA: 1000 ppm 10 hours. TWA: 1800 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b> TWA: 1000 ppm 8 hours. TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Lt. Aliphatic Hydrocarbon Solvent Butane	<p>None.</p> <p><b>NIOSH REL (United States, 10/2013).</b> TWA: 800 ppm 10 hours. TWA: 1900 mg/m<sup>3</sup> 10 hours.</p> <p><b>ACGIH TLV (United States, 3/2016).</b> STEL: 1000 ppm 15 minutes.</p>
Toluene	<p><b>OSHA PEL Z2 (United States, 2/2013).</b> TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b> TWA: 100 ppm 10 hours. TWA: 375 mg/m<sup>3</sup> 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m<sup>3</sup> 15 minutes.</p> <p><b>ACGIH TLV (United States, 3/2016).</b> TWA: 20 ppm 8 hours.</p>
Ethyl 3-Ethoxypropionate Titanium Dioxide	<p>None.</p> <p><b>ACGIH TLV (United States, 3/2016).</b> TWA: 10 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b> TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>

#### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
Acetone	<p><b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 1200 mg/m<sup>3</sup> 8 hours. 15 min OEL: 1800 mg/m<sup>3</sup> 15 minutes. 8 hrs OEL: 500 ppm 8 hours. 15 min OEL: 750 ppm 15 minutes.</p> <p><b>CA British Columbia Provincial (Canada, 5/2015).</b> TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b></p>

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## Section 8. Exposure controls/personal protection

Propane	<p>TWAEV: 500 ppm 8 hours.            TWAEV: 1190 mg/m<sup>3</sup> 8 hours.            STEV: 1000 ppm 15 minutes.            STEV: 2380 mg/m<sup>3</sup> 15 minutes.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b>            STEL: 750 ppm 15 minutes.            TWA: 500 ppm 8 hours.  <b>CA Alberta Provincial (Canada, 4/2009).</b>            8 hrs OEL: 1000 ppm 8 hours.  <b>CA British Columbia Provincial (Canada, 5/2015).</b>            TWA: 1000 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 1/2014).</b>            TWAEV: 1000 ppm 8 hours.            TWAEV: 1800 mg/m<sup>3</sup> 8 hours.  <b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 1000 ppm 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b>            STEL: 1250 ppm 15 minutes.            TWA: 1000 ppm 8 hours.</p>
Toluene	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  <b>Absorbed through skin.</b>            8 hrs OEL: 50 ppm 8 hours.            8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.  <b>CA British Columbia Provincial (Canada, 5/2015).</b>            TWA: 20 ppm 8 hours.  <b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 20 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 1/2014).</b>  <b>Absorbed through skin.</b>            TWAEV: 50 ppm 8 hours.            TWAEV: 188 mg/m<sup>3</sup> 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> <b>Absorbed through skin.</b>            STEL: 60 ppm 15 minutes.            TWA: 50 ppm 8 hours.</p>

### Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
Acetone	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>            LMPE-PPT: 500 ppm 8 hours.            LMPE-CT: 750 ppm 15 minutes.</p>
Propane	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>            LMPE-PPT: 1000 ppm 8 hours.</p>
Butane	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>            LMPE-PPT: 1000 ppm 8 hours.</p>
Toluene	<p><b>NOM-010-STPS (Mexico, 4/2016).</b>            LMPE-PPT: 20 ppm 8 hours.</p>

### Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

## Section 8. Exposure controls/personal protection

- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Yellow.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%  
Upper: 12.8%
- Vapor pressure** : 101.3 kPa (760 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]
- Relative density** : 0.76

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## Section 9. Physical and chemical properties

- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <0.205 cm<sup>2</sup>/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 28.55 kJ/g

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
Ethyl 3-Ethoxypropionate	LD50 Oral	Rat	636 mg/kg	-
	LD50 Oral	Rat	3200 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Toluene	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870	-

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## Section 11. Toxicological information

Ethyl 3-Ethoxypropionate	Eyes - Severe irritant	Rabbit	-	Micrograms 24 hours 2	-
	Skin - Mild irritant	Pig	-	milligrams 24 hours 250	-
	Skin - Mild irritant	Rabbit	-	microliters 435	-
	Skin - Moderate irritant	Rabbit	-	milligrams 24 hours 20	-
	Skin - Moderate irritant	Rabbit	-	milligrams 500	-
Titanium Dioxide	Skin - Mild irritant	Human	-	milligrams 24 hours 500 milligrams 72 hours 300 Micrograms Intermittent	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Titanium Dioxide	-	2B	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Toluene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** : No known significant effects or critical hazards.

**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

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**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Route	ATE value
Oral	5989 mg/kg

**Section 12. Ecological information**

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 6900 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
Titanium Dioxide	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

**Persistence and degradability**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Toluene	-	-	Readily

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## Section 12. Ecological information

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Toluene	-	90	low

### Mobility in soil






Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).  <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules (EmS)</b> F-D, S-U

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## Section 14. Transport information

**Special precautions for user** : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

**Proper shipping name** : Not available.  
**Ship type** : Not available.  
**Pollution category** : Not available.

## Section 15. Regulatory information

### SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

### California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.**

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

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## Section 16. Other information

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**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

**Notice to reader**

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

# SAFETY DATA SHEET

03640

## Section 1. Identification

**Product name** : KRYLON® Industrial QUIK-MARK™ Solvent-Based Inverted Marking Paint (Silver)  
Silver

**Product code** : 03640

**Other means of identification** : Not available.

**CAS #** : Not applicable.

**Product type** : Aerosol.

### Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

**Manufacturer** : Krylon Products Group  
Cleveland, OH 44115

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 247-3266

**Regulatory Information Telephone Number** : (216) 566-2902

**Transportation Emergency Telephone Number** : (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1  
ASPIRATION HAZARD - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 17.7%

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

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## Section 2. Hazards identification

<b>Hazard statements</b>	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. Suspected of damaging the unborn child. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure.
<b>Precautionary statements</b>	
<b>General</b>	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
<b>Prevention</b>	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
<b>Response</b>	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
<b>Storage</b>	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.  Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
<b>Hazards not otherwise classified</b>	: None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available.
<b>CAS number/other identifiers</b>	

## Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Acetone	31.9	67-64-1
Hydrocarbon Polymer	20.88	68240-01-7
Toluene	15.52	108-88-3
Propane	12.24	74-98-6
Butane	11.76	106-97-8
Xylene	1.7	1330-20-7
Med. Aliphatic Hydrocarbon Solvent	1.68	64742-88-7
Ethylbenzene	0.3	100-41-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

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## Section 4. First aid measures

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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## Section 5. Fire-fighting measures

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Acetone	<b>ACGIH TLV (United States, 3/2016).</b> TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. <b>NIOSH REL (United States, 10/2013).</b> TWA: 250 ppm 10 hours. TWA: 590 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 6/2016).</b> TWA: 1000 ppm 8 hours. TWA: 2400 mg/m <sup>3</sup> 8 hours.
Hydrocarbon Polymer Toluene	None. <b>OSHA PEL Z2 (United States, 2/2013).</b> TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. <b>NIOSH REL (United States, 10/2013).</b> TWA: 100 ppm 10 hours. TWA: 375 mg/m <sup>3</sup> 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m <sup>3</sup> 15 minutes. <b>ACGIH TLV (United States, 3/2016).</b> TWA: 20 ppm 8 hours.
Propane	<b>NIOSH REL (United States, 10/2013).</b> TWA: 1000 ppm 10 hours. TWA: 1800 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 6/2016).</b> TWA: 1000 ppm 8 hours. TWA: 1800 mg/m <sup>3</sup> 8 hours.
Butane	<b>NIOSH REL (United States, 10/2013).</b> TWA: 800 ppm 10 hours. TWA: 1900 mg/m <sup>3</sup> 10 hours. <b>ACGIH TLV (United States, 3/2016).</b> STEL: 1000 ppm 15 minutes.
Xylene	<b>ACGIH TLV (United States, 3/2016).</b> TWA: 100 ppm 8 hours. TWA: 434 mg/m <sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 6/2016).</b> TWA: 100 ppm 8 hours. TWA: 435 mg/m <sup>3</sup> 8 hours.
Med. Aliphatic Hydrocarbon Solvent	<b>OSHA PEL (United States, 6/2016).</b> TWA: 100 ppm 8 hours. TWA: 400 mg/m <sup>3</sup> 8 hours.
Ethylbenzene	<b>ACGIH TLV (United States, 3/2016).</b> TWA: 20 ppm 8 hours. <b>NIOSH REL (United States, 10/2013).</b> TWA: 100 ppm 10 hours. TWA: 435 mg/m <sup>3</sup> 10 hours.

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## Section 8. Exposure controls/personal protection

STEL: 125 ppm 15 minutes.  
 STEL: 545 mg/m<sup>3</sup> 15 minutes.  
**OSHA PEL (United States, 6/2016).**  
 TWA: 100 ppm 8 hours.  
 TWA: 435 mg/m<sup>3</sup> 8 hours.

### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
Acetone	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>            8 hrs OEL: 1200 mg/m<sup>3</sup> 8 hours.            15 min OEL: 1800 mg/m<sup>3</sup> 15 minutes.            8 hrs OEL: 500 ppm 8 hours.            15 min OEL: 750 ppm 15 minutes.</p> <p><b>CA British Columbia Provincial (Canada, 5/2015).</b>            TWA: 250 ppm 8 hours.            STEL: 500 ppm 15 minutes.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 500 ppm 8 hours.            STEL: 750 ppm 15 minutes.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>            TWAEV: 500 ppm 8 hours.            TWAEV: 1190 mg/m<sup>3</sup> 8 hours.            STEV: 1000 ppm 15 minutes.            STEV: 2380 mg/m<sup>3</sup> 15 minutes.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>            STEL: 750 ppm 15 minutes.            TWA: 500 ppm 8 hours.</p>
Toluene	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  <b>Absorbed through skin.</b>            8 hrs OEL: 50 ppm 8 hours.            8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 5/2015).</b>            TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 20 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>  <b>Absorbed through skin.</b>            TWAEV: 50 ppm 8 hours.            TWAEV: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>  <b>Absorbed through skin.</b>            STEL: 60 ppm 15 minutes.            TWA: 50 ppm 8 hours.</p>
Propane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>            8 hrs OEL: 1000 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 5/2015).</b>            TWA: 1000 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>            TWAEV: 1000 ppm 8 hours.            TWAEV: 1800 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 1000 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada,</b></p>



## Section 8. Exposure controls/personal protection

Butane	<b>7/2013).</b> STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours. <b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 1000 ppm 8 hours. <b>CA British Columbia Provincial (Canada, 5/2015).</b> TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes. <b>CA Quebec Provincial (Canada, 1/2014).</b> TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m <sup>3</sup> 8 hours. <b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 800 ppm 8 hours. <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours. <b>CA Quebec Provincial (Canada, 1/2014).</b> TWAEV: 400 ppm 8 hours. TWAEV: 1590 mg/m <sup>3</sup> 8 hours.
Med. Aliphatic Hydrocarbon Solvent	

### Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
Acetone	<b>NOM-010-STPS (Mexico, 4/2016).</b> LMPE-PPT: 500 ppm 8 hours. LMPE-CT: 750 ppm 15 minutes.
Toluene	<b>NOM-010-STPS (Mexico, 4/2016).</b> LMPE-PPT: 20 ppm 8 hours.
Propane	<b>NOM-010-STPS (Mexico, 4/2016).</b> LMPE-PPT: 1000 ppm 8 hours.
Butane	<b>NOM-010-STPS (Mexico, 4/2016).</b> LMPE-PPT: 1000 ppm 8 hours.
Xylene	<b>NOM-010-STPS (Mexico, 4/2016).</b> LMPE-CT: 150 ppm 15 minutes. LMPE-PPT: 100 ppm 8 hours.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

## Section 8. Exposure controls/personal protection

### Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 1%  
Upper: 12.8%
- Vapor pressure** : 101.3 kPa (760 mm Hg) [at 20°C]
- Vapor density** : 1.55 [Air = 1]
- Relative density** : 0.77
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <0.205 cm<sup>2</sup>/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 24.97 kJ/g

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
Toluene	LD50 Oral	Rat	636 mg/kg	-
	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
Xylene	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Ethylbenzene	LD50 Oral	Rat	3500 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
Toluene	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
Xylene	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Xylene	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	87 milligrams	-

## Section 11. Toxicological information

Ethylbenzene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant Eyes - Severe irritant	Rabbit Rabbit	- -	100 Percent 500 milligrams	- -
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Xylene	-	3	-
Ethylbenzene	-	2B	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

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## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Med. Aliphatic Hydrocarbon Solvent	Category 1	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Xylene	ASPIRATION HAZARD - Category 1
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
 nausea or vomiting  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**General** : Causes damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Route	ATE value
Oral	3316.3 mg/kg
Inhalation (gases)	242342.2 ppm

**Section 12. Ecological information**

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 6900 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
Xylene	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes	48 hours

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## Section 12. Ecological information

Ethylbenzene	Acute LC50 13400 µg/l Fresh water	pugio	96 hours
	Acute EC50 4600 µg/l Fresh water	Fish - Pimephales promelas	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	48 hours
	Acute EC50 2930 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
Acute LC50 4200 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	96 hours	
		Fish - Oncorhynchus mykiss	

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Toluene	-	-	Readily
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	low
Xylene	-	8.1 to 25.9	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations






**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS

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## Section 14. Transport information

<b>Transport hazard class(es)</b>	2.1 	2.1 	2.1 	2.1 	2.1 
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules (EmS)</b> F-D, S-U

**Special precautions for user :** Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code :** Not available.

**Proper shipping name :** Not available.  
**Ship type :** Not available.  
**Pollution category :** Not available.

## Section 15. Regulatory information

**SARA 313**

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

**California Prop. 65**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 16. Other information

**Hazardous Material Information System (U.S.A.)**

Health	*	2
Flammability		3
Physical hazards		1

The customer is responsible for determining the PPE code for this material.



## Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

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**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

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# SAFETY DATA SHEET

A03904004

## Section 1. Identification

**Product name** : KRYLON® Industrial QUIK-MARK™ Water-Based Inverted Marking Paint (APWA) Green  
**Product code** : A03904004  
**Other means of identification** : Not available.  
**Product type** : Aerosol.  
**Relevant identified uses of the substance or mixture and uses advised against**  
Not applicable.

**Manufacturer** : Krylon Products Group  
101 Prospect Avenue NW  
Cleveland, OH 44115

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 247-3266

**Regulatory Information Telephone Number** : (216) 566-2902

**Transportation Emergency Telephone Number** : (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 25.9%  
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 35.8%  
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 21.4%

### GHS label elements

#### Hazard pictograms



**Signal word** : Danger

## Section 2. Hazards identification

**Hazard statements** : Extremely flammable aerosol.  
 Contains gas under pressure; may explode if heated.  
 Causes serious eye irritation.  
 Causes skin irritation.  
 Suspected of damaging the unborn child.  
 Suspected of causing cancer.  
 May be fatal if swallowed and enters airways.  
 May cause respiratory irritation.  
 May cause drowsiness or dizziness.  
 May cause damage to organs through prolonged or repeated exposure.

### Precautionary statements

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

**Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Storage** : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.  
 Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

**Hazards not otherwise classified** : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Other means of identification** : Not available.

### CAS number/other identifiers

Ingredient name	% by weight	CAS number
Toluene	9.95	108-88-3
Propane	9.52	74-98-6
Light Aliphatic Hydrocarbon	9	64742-47-8
Butane	4.48	106-97-8
Calcium Carbonate	1.57	1317-65-3
Lt. Aliphatic Hydrocarbon Solvent	1.3	64742-89-8
Titanium Dioxide	0.32	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put

## Section 6. Accidental release measures

on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Toluene	<p><b>OSHA PEL Z2 (United States, 2/2013).</b>            TWA: 200 ppm 8 hours.            CEIL: 300 ppm            AMP: 500 ppm 10 minutes.</p> <p><b>NIOSH REL (United States, 10/2016).</b>            TWA: 100 ppm 10 hours.            TWA: 375 mg/m<sup>3</sup> 10 hours.            STEL: 150 ppm 15 minutes.            STEL: 560 mg/m<sup>3</sup> 15 minutes.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>            TWA: 20 ppm 8 hours.</p>
Propane	<p><b>NIOSH REL (United States, 10/2016).</b>            TWA: 1000 ppm 10 hours.            TWA: 1800 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>            TWA: 1000 ppm 8 hours.            TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Light Aliphatic Hydrocarbon	<p><b>OSHA PEL (United States, 6/2016).</b>            TWA: 100 ppm 8 hours.            TWA: 400 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>NIOSH REL (United States, 10/2016).</b>            TWA: 800 ppm 10 hours.            TWA: 1900 mg/m<sup>3</sup> 10 hours.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>            STEL: 1000 ppm 15 minutes.</p>
Calcium Carbonate	<p><b>NIOSH REL (United States, 10/2016).</b>            TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction            TWA: 10 mg/m<sup>3</sup> 10 hours. Form: Total</p> <p><b>OSHA PEL (United States, 6/2016).</b>            TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction            TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>
Lt. Aliphatic Hydrocarbon Solvent Titanium Dioxide	<p>None.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>            TWA: 10 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>            TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>

### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
toluene	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  <b>Absorbed through skin.</b>            8 hrs OEL: 50 ppm 8 hours.            8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b>            TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 20 ppm 8 hours.</p> <p><b>CA Québec Provincial (Canada, 1/2014).</b>  <b>Absorbed through skin.</b>            TWAEV: 50 ppm 8 hours.            TWAEV: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> <b>Absorbed through skin.</b>            STEL: 60 ppm 15 minutes.            TWA: 50 ppm 8 hours.</p>



## Section 8. Exposure controls/personal protection

Propane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 1000 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b> TWA: 1000 ppm 8 hours.</p> <p><b>CA Québec Provincial (Canada, 1/2014).</b> TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 1000 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p>
Solvent naphtha (petroleum), medium aliph.	<p><b>CA Québec Provincial (Canada, 1/2014).</b> TWAEV: 400 ppm 8 hours. TWAEV: 1590 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 525 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 1000 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b> TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes.</p> <p><b>CA Québec Provincial (Canada, 1/2014).</b> TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 800 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p>

**Occupational exposure limits (Mexico)**

<b>Ingredient name</b>	<b>Exposure limits</b>
toluene	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 20 ppm 8 hours.
Propane	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 1000 ppm 8 hours.
Butane	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 1000 ppm 8 hours.

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

## Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 2 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%  
Upper: 9.5%
- Vapor pressure** : 101.3 kPa (760 mm Hg) [at 20°C]
- Vapor density** : 1 [Air = 1]
- Relative density** : 0.86
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <0.205 cm<sup>2</sup>/s (<20.5 cSt)
- Molecular weight** : Not applicable.

## Section 9. Physical and chemical properties

### Aerosol product

Type of aerosol : Spray  
Heat of combustion : 13.726 kJ/g

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).

**Incompatible materials** : No specific data.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
				100 milligrams	
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	500 milligrams	-
				72 hours 300 Micrograms Intermittent	-

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

## Section 11. Toxicological information

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Titanium Dioxide	-	2B	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Calcium Carbonate	Category 3	Not applicable.	Respiratory tract irritation
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

<b>Route</b>	<b>ATE value</b>
Oral	4737.1 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations






**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
<b>UN number</b>	UN1950	UN1950	UN1950	UN1950	UN1950
<b>UN proper shipping name</b>	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS

**Date of issue/Date of revision** : 12/22/2017 **Date of previous issue** : 12/1/2017 **Version** : 8.01 12/15  
 A03904004 KRYLON® Industrial QUIK-MARK™ Water-Based Inverted Marking Paint (APWA) Green

## Section 14. Transport information

<b>Transport hazard class(es)</b>	2.1 	2.1 	2.1 	2.1 	2.1 
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).  <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules</b> F-D, S-U

**Special precautions for user :** Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code :** Not available.

**Proper shipping name :** Not available.  
**Ship type :** Not available.  
**Pollution category :** Not available.

## Section 15. Regulatory information

**SARA 313**

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

**California Prop. 65**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 16. Other information

**Hazardous Material Information System (U.S.A.)**

Health	*	2
Flammability		2
Physical hazards		0

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

## Section 16. Other information

**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.**

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

### History

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**Date of previous issue** : 12/1/2017

**Version** : 8.01

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 UN = United Nations

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.





# SAFETY DATA SHEET

A03801004

## Section 1. Identification

**Product name** : KRYLON® Industrial QUIK-MARK™ Water-Based Inverted Marking Paint (APWA)  
Utility Yellow

**Product code** : A03801004

**Other means of identification** : Not available.

**Product type** : Aerosol.

### Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

**Manufacturer** : Krylon Products Group  
101 Prospect Avenue NW  
Cleveland, OH 44115

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 247-3266

**Regulatory Information Telephone Number** : (216) 566-2902

**Transportation Emergency Telephone Number** : (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1  
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 26.3%  
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 37.2%  
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 21.8%

### GHS label elements

#### Hazard pictograms



**Signal word** : Danger

## Section 2. Hazards identification

- Hazard statements** : Extremely flammable aerosol.  
Contains gas under pressure; may explode if heated.  
Causes serious eye irritation.  
Causes skin irritation.  
Suspected of damaging the unborn child.  
Suspected of causing cancer.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
Causes damage to organs through prolonged or repeated exposure. (lungs)
- Precautionary statements**
- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
- Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.  
Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
- Hazards not otherwise classified** : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.
- CAS number/other identifiers**

Ingredient name	% by weight	CAS number
Toluene	10.87	108-88-3
Propane	9.52	74-98-6
Light Aliphatic Hydrocarbon	8	64742-47-8
Butane	4.48	106-97-8
Calcium Carbonate	2.33	1317-65-3
Lt. Aliphatic Hydrocarbon Solvent	1.99	64742-89-8
Talc	1.01	14807-96-6
Titanium Dioxide	0.69	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

## Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

### Specific hazards arising from the chemical

- : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

### Hazardous thermal decomposition products

- : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides

### Special protective actions for fire-fighters

- : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

### Special protective equipment for fire-fighters

- : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put

## Section 6. Accidental release measures

on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Toluene	<p><b>OSHA PEL Z2 (United States, 2/2013).</b>                      TWA: 200 ppm 8 hours.                      CEIL: 300 ppm                      AMP: 500 ppm 10 minutes.  <b>NIOSH REL (United States, 10/2016).</b>                      TWA: 100 ppm 10 hours.                      TWA: 375 mg/m<sup>3</sup> 10 hours.                      STEL: 150 ppm 15 minutes.                      STEL: 560 mg/m<sup>3</sup> 15 minutes.  <b>ACGIH TLV (United States, 3/2016).</b>                      TWA: 20 ppm 8 hours.</p>
Propane	<p><b>NIOSH REL (United States, 10/2016).</b>                      TWA: 1000 ppm 10 hours.                      TWA: 1800 mg/m<sup>3</sup> 10 hours.  <b>OSHA PEL (United States, 6/2016).</b>                      TWA: 1000 ppm 8 hours.                      TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Light Aliphatic Hydrocarbon	<p><b>OSHA PEL (United States, 6/2016).</b>                      TWA: 100 ppm 8 hours.                      TWA: 400 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>NIOSH REL (United States, 10/2016).</b>                      TWA: 800 ppm 10 hours.                      TWA: 1900 mg/m<sup>3</sup> 10 hours.  <b>ACGIH TLV (United States, 3/2016).</b>                      STEL: 1000 ppm 15 minutes.</p>
Calcium Carbonate	<p><b>NIOSH REL (United States, 10/2016).</b>                      TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction                      TWA: 10 mg/m<sup>3</sup> 10 hours. Form: Total  <b>OSHA PEL (United States, 6/2016).</b>                      TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction                      TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>
Lt. Aliphatic Hydrocarbon Solvent Talc	<p>None.  <b>NIOSH REL (United States, 10/2016).</b>                      TWA: 2 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction  <b>ACGIH TLV (United States, 3/2016).</b>                      TWA: 2 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction</p>
Titanium Dioxide	<p><b>ACGIH TLV (United States, 3/2016).</b>                      TWA: 10 mg/m<sup>3</sup> 8 hours.  <b>OSHA PEL (United States, 6/2016).</b>                      TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>

### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
toluene	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  <b>Absorbed through skin.</b>                      8 hrs OEL: 50 ppm 8 hours.                      8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.  <b>CA British Columbia Provincial (Canada, 7/2016).</b>                      TWA: 20 ppm 8 hours.  <b>CA Ontario Provincial (Canada, 7/2015).</b>                      TWA: 20 ppm 8 hours.  <b>CA Québec Provincial (Canada, 1/2014).</b>  <b>Absorbed through skin.</b></p>

## Section 8. Exposure controls/personal protection

Propane	<p>TWAEV: 50 ppm 8 hours.          TWAEV: 188 mg/m<sup>3</sup> 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b>          STEL: 60 ppm 15 minutes.          TWA: 50 ppm 8 hours.  <b>CA Alberta Provincial (Canada, 4/2009).</b>          8 hrs OEL: 1000 ppm 8 hours.  <b>CA British Columbia Provincial (Canada, 7/2016).</b>          TWA: 1000 ppm 8 hours.  <b>CA Québec Provincial (Canada, 1/2014).</b>          TWAEV: 1000 ppm 8 hours.          TWAEV: 1800 mg/m<sup>3</sup> 8 hours.  <b>CA Ontario Provincial (Canada, 7/2015).</b>          TWA: 1000 ppm 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b>          STEL: 1250 ppm 15 minutes.          TWA: 1000 ppm 8 hours.</p>
Solvent naphtha (petroleum), medium aliph.	<p><b>CA Québec Provincial (Canada, 1/2014).</b>          TWAEV: 400 ppm 8 hours.          TWAEV: 1590 mg/m<sup>3</sup> 8 hours.  <b>CA Ontario Provincial (Canada, 7/2015).</b>          TWA: 525 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>          8 hrs OEL: 1000 ppm 8 hours.  <b>CA British Columbia Provincial (Canada, 7/2016).</b>          TWA: 600 ppm 8 hours.          STEL: 750 ppm 15 minutes.  <b>CA Québec Provincial (Canada, 1/2014).</b>          TWAEV: 800 ppm 8 hours.          TWAEV: 1900 mg/m<sup>3</sup> 8 hours.  <b>CA Ontario Provincial (Canada, 7/2015).</b>          TWA: 800 ppm 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b>          STEL: 1250 ppm 15 minutes.          TWA: 1000 ppm 8 hours.</p>

### Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
toluene	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 20 ppm 8 hours.
Propane	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 1000 ppm 8 hours.
Butane	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 1000 ppm 8 hours.

### Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

### Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.



## Section 8. Exposure controls/personal protection

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 2 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%  
Upper: 9.5%
- Vapor pressure** : 101.3 kPa (760 mm Hg) [at 20°C]
- Vapor density** : 1 [Air = 1]
- Relative density** : 0.87
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <0.205 cm<sup>2</sup>/s (<20.5 cSt)

## Section 9. Physical and chemical properties

**Molecular weight** : Not applicable.

**Aerosol product**

**Type of aerosol** : Spray

**Heat of combustion** : 13.913 kJ/g

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).

**Incompatible materials** : No specific data.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

**Information on toxicological effects**

**Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
Butane	LD50 Oral	Rat	636 mg/kg	-
	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild irritant	Pig	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 250 microliters	-
	Skin - Moderate irritant	Rabbit	-	435 milligrams	-
Talc	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Mild irritant	Human	-	500 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
				72 hours 300 Micrograms Intermittent	-

**Sensitization**

Not available.

**Mutagenicity**

## Section 11. Toxicological information

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Talc	-	3	-
Titanium Dioxide	-	2B	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Calcium Carbonate	Category 3	Not applicable.	Respiratory tract irritation
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Talc	Category 1	Inhalation	lungs

### Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

- Eye contact** : Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness
- Inhalation** : Adverse symptoms may include the following:
  - respiratory tract irritation
  - coughing
  - nausea or vomiting
  - headache
  - drowsiness/fatigue
  - dizziness/vertigo
  - unconsciousness
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
  - irritation
  - redness
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
  - nausea or vomiting
  - reduced fetal weight
  - increase in fetal deaths
  - skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Long term exposure**

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

- General** : Causes damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child.
- Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Route	ATE value
Oral	4309 mg/kg

**Section 12. Ecological information**

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
Lt. Aliphatic Hydrocarbon Solvent	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

**Persistence and degradability**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

**Mobility in soil**






**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
<b>UN number</b>	UN1950	UN1950	UN1950	UN1950	UN1950
<b>UN proper shipping name</b>	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
<b>Transport hazard class(es)</b>	2.1 	2.1 	2.1 	2.1 	2.1 
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).  <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules</b> F-D, S-U

**Special precautions for user :** Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code :** Not available.

**Proper shipping name :** Not available.  
**Ship type :** Not available.  
**Pollution category :** Not available.

## Section 15. Regulatory information

**SARA 313**

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

**California Prop. 65**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

# Section 16. Other information

## Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) - Category 1	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

### History

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Key to abbreviations : ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 UN = United Nations

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to

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A03801004 KRYLON® Industrial QUIK-MARK™ Water-Based Inverted Marking Paint (APWA) Utility Yellow						

## Section 16. Other information

determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.



# SAFETY DATA SHEET

K08315000

## Section 1. Identification

**Product name** : KRYLON® LINE-UP™ Athletic Striping Paint (Water-Based)  
Fluorescent Green

**Product code** : K08315000

**Other means of identification** : Not available.

**CAS #** : Not applicable.

**Product type** : Aerosol.

### Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

**Manufacturer** : Krylon Products Group  
101 Prospect Avenue NW  
Cleveland, OH 44115

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 247-3266

**Regulatory Information Telephone Number** : (216) 566-2902

**Transportation Emergency Telephone Number** : (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
TOXIC TO REPRODUCTION (Fertility) - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 20.8%  
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 36.5%  
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 18.3%

### GHS label elements

**Hazard pictograms** :



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## Section 2. Hazards identification

- Signal word** : Danger
- Hazard statements** : Extremely flammable aerosol.  
Contains gas under pressure; may explode if heated.  
Causes serious eye irritation.  
Causes skin irritation.  
Suspected of damaging fertility or the unborn child.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.

### Precautionary statements

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
- Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.  
Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
- Hazards not otherwise classified** : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

### CAS number/other identifiers

Ingredient name	% by weight	CAS number
Toluene	13.41	108-88-3
Propane	10.2	74-98-6
Butane	4.8	106-97-8
Lt. Aliphatic Hydrocarbon Solvent	3.45	64742-89-8
Light Aliphatic Hydrocarbon Solvent	2.31	64742-49-0
Light Aliphatic Hydrocarbon Solvent	2.31	68410-97-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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## Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight

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## Section 4. First aid measures

- increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

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## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Toluene	<p><b>OSHA PEL Z2 (United States, 2/2013).</b>                      TWA: 200 ppm 8 hours.                      CEIL: 300 ppm                      AMP: 500 ppm 10 minutes.</p> <p><b>NIOSH REL (United States, 10/2016).</b>                      TWA: 100 ppm 10 hours.                      TWA: 375 mg/m<sup>3</sup> 10 hours.                      STEL: 150 ppm 15 minutes.                      STEL: 560 mg/m<sup>3</sup> 15 minutes.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>                      TWA: 20 ppm 8 hours.</p>
Propane	<p><b>NIOSH REL (United States, 10/2016).</b>                      TWA: 1000 ppm 10 hours.                      TWA: 1800 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>                      TWA: 1000 ppm 8 hours.                      TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>NIOSH REL (United States, 10/2016).</b>                      TWA: 800 ppm 10 hours.                      TWA: 1900 mg/m<sup>3</sup> 10 hours.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>                      STEL: 1000 ppm 15 minutes.</p>
Lt. Aliphatic Hydrocarbon Solvent Light Aliphatic Hydrocarbon Solvent Light Aliphatic Hydrocarbon Solvent	<p>None. None. None.</p>

#### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
toluene	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  <b>Absorbed through skin.</b>                      8 hrs OEL: 50 ppm 8 hours.                      8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b>                      TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>                      TWA: 20 ppm 8 hours.</p> <p><b>CA Québec Provincial (Canada, 1/2014).</b>  <b>Absorbed through skin.</b>                      TWAEV: 50 ppm 8 hours.                      TWAEV: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> <b>Absorbed through skin.</b>                      STEL: 60 ppm 15 minutes.                      TWA: 50 ppm 8 hours.</p>
Propane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>                      8 hrs OEL: 1000 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b>                      TWA: 1000 ppm 8 hours.</p> <p><b>CA Québec Provincial (Canada, 1/2014).</b>                      TWAEV: 1000 ppm 8 hours.                      TWAEV: 1800 mg/m<sup>3</sup> 8 hours.</p>

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## Section 8. Exposure controls/personal protection

Butane	<p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 1000 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p> <p><b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 1000 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b> TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes.</p> <p><b>CA Québec Provincial (Canada, 1/2014).</b> TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 800 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p>
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### Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
toluene	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 20 ppm 8 hours.
Propane	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 1000 ppm 8 hours.
Butane	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 1000 ppm 8 hours.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

### Skin protection

## Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 2 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%  
Upper: 9.5%
- Vapor pressure** : 101.3 kPa (760 mm Hg) [at 20°C]
- Vapor density** : 1 [Air = 1]
- Relative density** : 0.85
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <0.205 cm<sup>2</sup>/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 14.688 kJ/g



## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours
Light Aliphatic Hydrocarbon Solvent	LD50 Oral	Rat	5.17 g/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-

## Section 11. Toxicological information

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

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**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : Suspected of damaging fertility.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Route	ATE value
Oral	3759 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene  Lt. Aliphatic Hydrocarbon Solvent	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Light Aliphatic Hydrocarbon Solvent	-	10 to 2500	high
Light Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

### Mobility in soil






**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
<b>UN number</b>	UN1950	UN1950	UN1950	UN1950	UN1950
<b>UN proper shipping name</b>	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
<b>Transport hazard class(es)</b>	2.1 	2.1 	2.1 	2.1 	2.1 
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).  <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules</b> F-D, S-U

**Special precautions for user :** Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code :** Not available.

**Proper shipping name :** Not available.  
**Ship type :** Not available.  
**Pollution category :** Not available.

## Section 15. Regulatory information

**SARA 313**

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

**California Prop. 65**

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**Section 16. Other information**

**Hazardous Material Information System (U.S.A.)**

Health	2
Flammability	2
Physical hazards	0

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

**Procedure used to derive the classification**

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 2	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

**History**

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**Version** : 5.01

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

**Notice to reader**

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use

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## Section 16. Other information

or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

# SAFETY DATA SHEET

03402

## Section 1. Identification

**Product name** : KRYLON® QUIK-MARK™ Water-Based Inverted Marking Paint (APWA)  
Brilliant Yellow

**Product code** : 03402

**Other means of identification** : Not available.

**CAS #** : Not applicable.

**Product type** : Aerosol.

### Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

**Manufacturer** : Krylon Products Group  
Cleveland, OH 44115

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 247-3266

**Regulatory Information Telephone Number** : (216) 566-2902

**Transportation Emergency Telephone Number** : (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 19.5%

### GHS label elements

#### Hazard pictograms



**Signal word** : Danger

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## Section 2. Hazards identification

<b>Hazard statements</b>	: Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. Causes skin irritation. Suspected of damaging the unborn child. Suspected of causing cancer. May be fatal if swallowed and enters airways. May cause respiratory irritation. May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure.
<b>Precautionary statements</b>	
<b>General</b>	: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
<b>Prevention</b>	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash hands thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.
<b>Response</b>	: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
<b>Storage</b>	: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
<b>Disposal</b>	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Supplemental label elements</b>	DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.  Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
<b>Hazards not otherwise classified</b>	: None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Mixture
<b>Other means of identification</b>	: Not available.
<b>CAS number/other identifiers</b>	

## Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Toluene	10.87	108-88-3
Propane	9.52	74-98-6
Med. Aliphatic Hydrocarbon Solvent	8.02	64742-88-7
Butane	4.48	106-97-8
Lt. Aliphatic Hydrocarbon Solvent	1.99	64742-89-8
Titanium Dioxide	0.69	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

## Section 4. First aid measures

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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## Section 5. Fire-fighting measures

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

Ingredient name	Exposure limits
Toluene	<p><b>OSHA PEL Z2 (United States, 2/2013).</b>            TWA: 200 ppm 8 hours.            CEIL: 300 ppm            AMP: 500 ppm 10 minutes.</p> <p><b>NIOSH REL (United States, 10/2013).</b>            TWA: 100 ppm 10 hours.            TWA: 375 mg/m<sup>3</sup> 10 hours.            STEL: 150 ppm 15 minutes.            STEL: 560 mg/m<sup>3</sup> 15 minutes.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>            TWA: 20 ppm 8 hours.</p>
Propane	<p><b>NIOSH REL (United States, 10/2013).</b>            TWA: 1000 ppm 10 hours.            TWA: 1800 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>            TWA: 1000 ppm 8 hours.            TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Med. Aliphatic Hydrocarbon Solvent	<p><b>OSHA PEL (United States, 6/2016).</b>            TWA: 100 ppm 8 hours.            TWA: 400 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>NIOSH REL (United States, 10/2013).</b>            TWA: 800 ppm 10 hours.            TWA: 1900 mg/m<sup>3</sup> 10 hours.</p> <p><b>ACGIH TLV (United States, 3/2016).</b>            STEL: 1000 ppm 15 minutes.</p>
Lt. Aliphatic Hydrocarbon Solvent	None.
Titanium Dioxide	<p><b>ACGIH TLV (United States, 3/2016).</b>            TWA: 10 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b>            TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>

#### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
Toluene	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  <b>Absorbed through skin.</b>            8 hrs OEL: 50 ppm 8 hours.            8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 5/2015).</b>            TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 20 ppm 8 hours.</p> <p><b>CA Quebec Provincial (Canada, 1/2014).</b>  <b>Absorbed through skin.</b>            TWAEV: 50 ppm 8 hours.            TWAEV: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada,</b></p>

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## Section 8. Exposure controls/personal protection

7/2013). Absorbed through skin.

STEL: 60 ppm 15 minutes.

TWA: 50 ppm 8 hours.

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point** : Not available.
- Boiling point** : Not available.

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## Section 9. Physical and chemical properties

<b>Flash point</b>	: Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
<b>Evaporation rate</b>	: 2 (butyl acetate = 1)
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Lower: 0.9% Upper: 9.5%
<b>Vapor pressure</b>	: 13.5 kPa (101.325 mm Hg) [at 20°C]
<b>Vapor density</b>	: 1 [Air = 1]
<b>Relative density</b>	: 0.87
<b>Solubility</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (40°C (104°F)): <0.205 cm <sup>2</sup> /s (<20.5 cSt)
<b>Molecular weight</b>	: Not applicable.
<b>Aerosol product</b>	
Type of aerosol	: Spray
<b>Heat of combustion</b>	: 13.91 kJ/g

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame).
<b>Incompatible materials</b>	: No specific data.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor LD50 Oral	Rat Rat	49 g/m <sup>3</sup> 636 mg/kg	4 hours -
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild irritant	Pig	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 250 microliters	-
	Skin - Moderate irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	500 milligrams	-
				72 hours 300 Micrograms Intermittent	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Titanium Dioxide	-	2B	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

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## Section 11. Toxicological information

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

**Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Delayed and immediate effects and also chronic effects from short and long term exposure

### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	4705.6 mg/kg

## **Section 12. Ecological information**

### Toxicity

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

### Bioaccumulative potential

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## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene Lt. Aliphatic Hydrocarbon Solvent	- -	90 10 to 2500	low high

### Mobility in soil






Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).  <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules (EmS)</b> F-D, S-U

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## Section 14. Transport information

**Special precautions for user** : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

**Proper shipping name** : Not available.  
**Ship type** : Not available.  
**Pollution category** : Not available.

## Section 15. Regulatory information

### SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

### California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

**Caution:** HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

### Procedure used to derive the classification

#### **Classification**

FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1

#### **Justification**

On basis of test data  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method

### History

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## Section 16. Other information

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<b>Version</b>	: 4
<b>Key to abbreviations</b>	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

# SAFETY DATA SHEET

A03405004

## Section 1. Identification

**Product name** : KRYLON® QUIK-MARK™ Water-Based Inverted Marking Paint (Fluorescent)  
Fluorescent Pink

**Product code** : A03405004

**Other means of identification** : Not available.

**Product type** : Aerosol.

**Relevant identified uses of the substance or mixture and uses advised against**  
Not applicable.

**Manufacturer** : Krylon Products Group  
101 Prospect Avenue NW  
Cleveland, OH 44115

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 247-3266

**Regulatory Information Telephone Number** : (216) 566-2902

**Transportation Emergency Telephone Number** : (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 23.2%  
Percentage of the mixture consisting of ingredient(s) of unknown dermal toxicity: 32.9%  
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 18.7%

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

## Section 2. Hazards identification

- Hazard statements** : Extremely flammable aerosol.  
Contains gas under pressure; may explode if heated.  
Suspected of damaging the unborn child.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.
- Precautionary statements**
- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Pressurized container: Do not pierce or burn, even after use.
- Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
- Storage** : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.  
Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
- Hazards not otherwise classified** : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

### CAS number/other identifiers

Ingredient name	% by weight	CAS number
Toluene	9.77	108-88-3
Propane	9.52	74-98-6
Light Aliphatic Hydrocarbon	8	64742-47-8
Butane	4.48	106-97-8
Lt. Aliphatic Hydrocarbon Solvent	1.17	64742-89-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
irritation  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations



## Section 4. First aid measures

- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## Section 6. Accidental release measures

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)

<b>Ingredient name</b>	<b>Exposure limits</b>
Toluene	<b>OSHA PEL Z2 (United States, 2/2013).</b> TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. <b>NIOSH REL (United States, 10/2016).</b> TWA: 100 ppm 10 hours. TWA: 375 mg/m <sup>3</sup> 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m <sup>3</sup> 15 minutes. <b>ACGIH TLV (United States, 3/2016).</b> TWA: 20 ppm 8 hours.

## Section 8. Exposure controls/personal protection

Propane	<p><b>NIOSH REL (United States, 10/2016).</b> TWA: 1000 ppm 10 hours. TWA: 1800 mg/m<sup>3</sup> 10 hours.</p> <p><b>OSHA PEL (United States, 6/2016).</b> TWA: 1000 ppm 8 hours. TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Light Aliphatic Hydrocarbon	<p><b>OSHA PEL (United States, 6/2016).</b> TWA: 100 ppm 8 hours. TWA: 400 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>NIOSH REL (United States, 10/2016).</b> TWA: 800 ppm 10 hours. TWA: 1900 mg/m<sup>3</sup> 10 hours.</p> <p><b>ACGIH TLV (United States, 3/2016).</b> STEL: 1000 ppm 15 minutes.</p>
Lt. Aliphatic Hydrocarbon Solvent	None.

### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
toluene	<p><b>CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.</b> 8 hrs OEL: 50 ppm 8 hours. 8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b> TWA: 20 ppm 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 20 ppm 8 hours.</p> <p><b>CA Québec Provincial (Canada, 1/2014). Absorbed through skin.</b> TWAEV: 50 ppm 8 hours. TWAEV: 188 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b> STEL: 60 ppm 15 minutes. TWA: 50 ppm 8 hours.</p>
Propane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 1000 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b> TWA: 1000 ppm 8 hours.</p> <p><b>CA Québec Provincial (Canada, 1/2014).</b> TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 1000 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b> STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p>
Solvent naphtha (petroleum), medium aliph.	<p><b>CA Québec Provincial (Canada, 1/2014).</b> TWAEV: 400 ppm 8 hours. TWAEV: 1590 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b> TWA: 525 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b> 8 hrs OEL: 1000 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b> TWA: 600 ppm 8 hours. STEL: 750 ppm 15 minutes.</p>

## Section 8. Exposure controls/personal protection

**CA Québec Provincial (Canada, 1/2014).**  
 TWAEV: 800 ppm 8 hours.  
 TWAEV: 1900 mg/m<sup>3</sup> 8 hours.  
**CA Ontario Provincial (Canada, 7/2015).**  
 TWA: 800 ppm 8 hours.  
**CA Saskatchewan Provincial (Canada, 7/2013).**  
 STEL: 1250 ppm 15 minutes.  
 TWA: 1000 ppm 8 hours.

### Occupational exposure limits (Mexico)

Ingredient name	Exposure limits
toluene	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 20 ppm 8 hours.
Propane	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 1000 ppm 8 hours.
Butane	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 1000 ppm 8 hours.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## Section 8. Exposure controls/personal protection

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

**Physical state** : Liquid.  
**Color** : Not available.  
**Odor** : Not available.  
**Odor threshold** : Not available.  
**pH** : 7  
**Melting point** : Not available.  
**Boiling point** : Not available.  
**Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]  
**Evaporation rate** : 2 (butyl acetate = 1)  
**Flammability (solid, gas)** : Not available.  
**Lower and upper explosive (flammable) limits** : Lower: 0.9%  
Upper: 9.5%  
**Vapor pressure** : 101.3 kPa (760 mm Hg) [at 20°C]  
**Vapor density** : 1 [Air = 1]  
**Relative density** : 0.86  
**Solubility** : Not available.  
**Partition coefficient: n-octanol/water** : Not available.  
**Auto-ignition temperature** : Not available.  
**Decomposition temperature** : Not available.  
**Viscosity** : Kinematic (40°C (104°F)): <0.205 cm<sup>2</sup>/s (<20.5 cSt)  
**Molecular weight** : Not applicable.  
**Aerosol product**  
**Type of aerosol** : Spray  
**Heat of combustion** : 13.198 kJ/g

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).

**Incompatible materials** : No specific data.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# Section 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild irritant	Pig	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 250 microliters	-
	Skin - Moderate irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aliphatic Hydrocarbon	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

## Section 11. Toxicological information

irritation and  
Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Light Aliphatic Hydrocarbon	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
irritation  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

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**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Route	ATE value
Oral	5002 mg/kg

## Section 12. Ecological information

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

**Persistence and degradability**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

**Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.








## Section 12. Ecological information

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>Mexico Classification</b>	<b>IATA</b>	<b>IMDG</b>
<b>UN number</b>	UN1950	UN1950	UN1950	UN1950	UN1950
<b>UN proper shipping name</b>	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
<b>Transport hazard class(es)</b>	2.1 	2.1 	2.1 	2.1 	2.1 
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules</b> F-D, S-U

**Special precautions for user** : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

**Proper shipping name** : Not available.

**Ship type** : Not available.

**Pollution category** : Not available.

## Section 15. Regulatory information

### SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

### California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	2
Flammability	2
Physical hazards	0

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
TOXIC TO REPRODUCTION (Unborn child) - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

### History

Date of printing : 12/1/2017

Date of issue/Date of revision : 12/1/2017

Date of previous issue : 9/8/2017

Version : 7

Key to abbreviations : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use

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## Section 16. Other information

or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

# SAFETY DATA SHEET

03408

## Section 1. Identification

**Product name** : KRYLON® QUIK-MARK™ Water-Based Inverted Marking Paint (Fluorescent)  
Fluorescent Orange

**Product code** : 03408

**Other means of identification** : Not available.

**CAS #** : Not applicable.

**Product type** : Aerosol.

**Relevant identified uses of the substance or mixture and uses advised against**  
Not applicable.

**Manufacturer** : Krylon Products Group  
Cleveland, OH 44115

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 247-3266

**Regulatory Information Telephone Number** : (216) 566-2902

**Transportation Emergency Telephone Number** : (800) 424-9300

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 18.7%

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Date of issue/Date of revision** : 10/28/2016 **Date of previous issue** : 10/13/2016 **Version** : 3.04 1/14

## Section 2. Hazards identification

- Hazard statements** : Extremely flammable aerosol.  
Contains gas under pressure; may explode if heated.  
Suspected of damaging the unborn child.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.
- Precautionary statements**
- General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Pressurized container: Do not pierce or burn, even after use.
- Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
- Storage** : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
- Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

### CAS number/other identifiers

Ingredient name	% by weight	CAS number
Toluene	9.77	108-88-3
Propane	9.52	74-98-6
Med. Aliphatic Hydrocarbon Solvent	8.01	64742-88-7
Butane	4.48	106-97-8
Lt. Aliphatic Hydrocarbon Solvent	1.17	64742-89-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

**Occupational exposure limits, if available, are listed in Section 8.**

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## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
irritation  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

## Section 4. First aid measures

- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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## Section 6. Accidental release measures

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits (OSHA United States)



## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Toluene	<p><b>OSHA PEL Z2 (United States, 2/2013).</b>            TWA: 200 ppm 8 hours.            CEIL: 300 ppm            AMP: 500 ppm 10 minutes.  <b>NIOSH REL (United States, 10/2013).</b>            TWA: 100 ppm 10 hours.            TWA: 375 mg/m<sup>3</sup> 10 hours.            STEL: 150 ppm 15 minutes.            STEL: 560 mg/m<sup>3</sup> 15 minutes.  <b>ACGIH TLV (United States, 3/2015).</b>            TWA: 20 ppm 8 hours.</p>
Propane	<p><b>NIOSH REL (United States, 10/2013).</b>            TWA: 1000 ppm 10 hours.            TWA: 1800 mg/m<sup>3</sup> 10 hours.  <b>OSHA PEL (United States, 2/2013).</b>            TWA: 1000 ppm 8 hours.            TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Med. Aliphatic Hydrocarbon Solvent	<p><b>OSHA PEL (United States, 2/2013).</b>            TWA: 100 ppm 8 hours.            TWA: 400 mg/m<sup>3</sup> 8 hours.</p>
Butane	<p><b>NIOSH REL (United States, 10/2013).</b>            TWA: 800 ppm 10 hours.            TWA: 1900 mg/m<sup>3</sup> 10 hours.  <b>ACGIH TLV (United States, 3/2015).</b>            STEL: 1000 ppm 15 minutes.</p>
Lt. Aliphatic Hydrocarbon Solvent	None.

### Occupational exposure limits (Canada)

Ingredient name	Exposure limits
Toluene	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>  <b>Absorbed through skin.</b>            8 hrs OEL: 50 ppm 8 hours.            8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.  <b>CA British Columbia Provincial (Canada, 5/2015).</b>            TWA: 20 ppm 8 hours.  <b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 20 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 1/2014).</b>  <b>Absorbed through skin.</b>            TWAEV: 50 ppm 8 hours.            TWAEV: 188 mg/m<sup>3</sup> 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> <b>Absorbed through skin.</b>            STEL: 60 ppm 15 minutes.            TWA: 50 ppm 8 hours.</p>
Propane	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>            8 hrs OEL: 1000 ppm 8 hours.  <b>CA British Columbia Provincial (Canada, 5/2015).</b>            TWA: 1000 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 1/2014).</b>            TWAEV: 1000 ppm 8 hours.            TWAEV: 1800 mg/m<sup>3</sup> 8 hours.  <b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 1000 ppm 8 hours.</p>

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## Section 8. Exposure controls/personal protection

CA Saskatchewan Provincial (Canada, 7/2013).

STEL: 1250 ppm 15 minutes.

TWA: 1000 ppm 8 hours.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

**Physical state** : Liquid.

**Color** : Not available.

**Odor** : Not available.

**Odor threshold** : Not available.

**pH** : 7

**Melting point** : Not available.

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## Section 9. Physical and chemical properties

<b>Boiling point</b>	: Not available.
<b>Flash point</b>	: Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
<b>Evaporation rate</b>	: 2 (butyl acetate = 1)
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Lower: 0.9% Upper: 9.5%
<b>Vapor pressure</b>	: 13.5 kPa (101.325 mm Hg) [at 20°C]
<b>Vapor density</b>	: 1 [Air = 1]
<b>Relative density</b>	: 0.86
<b>Solubility</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (room temperature): <0.205 cm <sup>2</sup> /s (<20.5 cSt) Kinematic (40°C (104°F)): <0.205 cm <sup>2</sup> /s (<20.5 cSt)
<b>Molecular weight</b>	: Not applicable.
<b><u>Aerosol product</u></b>	
<b>Type of aerosol</b>	: Spray
<b>Heat of combustion</b>	: 13.22 kJ/g

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame).
<b>Incompatible materials</b>	: No specific data.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours

#### Irritation/Corrosion

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	870 Micrograms	-
	Skin - Mild irritant	Pig	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 250 microliters	-
	Skin - Moderate irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
				500 milligrams	-

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Propane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Butane	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Toluene	Category 2	Not determined	Not determined
Propane	Category 2	Not determined	Not determined
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Butane	Category 2	Not determined	Not determined
Lt. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Propane	ASPIRATION HAZARD - Category 1
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
irritation  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
nausea or vomiting  
headache  
drowsiness/fatigue  
dizziness/vertigo  
unconsciousness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

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**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**General** : May cause damage to organs through prolonged or repeated exposure.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

Route	ATE value
Oral	5293.2 mg/kg

**Section 12. Ecological information**

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Toluene	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Lt. Aliphatic Hydrocarbon Solvent	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

**Persistence and degradability**

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	high

**Mobility in soil**

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## Section 12. Ecological information






**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

## Section 14. Transport information

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>Mexico Classification</b>	<b>IATA</b>	<b>IMDG</b>
<b>UN number</b>	UN1950	UN1950	UN1950	UN1950	UN1950
<b>UN proper shipping name</b>	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
<b>Transport hazard class(es)</b>	2.1 	2.1 	2.1 	2.1 	2.1 
<b>Packing group</b>	-	-	-	-	-
<b>Environmental hazards</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	-  <b>ERG No.</b> 126	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). <b>ERG No.</b> 126	-  <b>ERG No.</b> 126	-	<b>Emergency schedules (EmS)</b> F-D, S-U

**Special precautions for user** : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

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## Section 14. Transport information

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.  
Ship type : Not available.  
Pollution category : Not available.

## Section 15. Regulatory information

### SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

### California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health	2
Flammability	2
Physical hazards	0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

### Procedure used to derive the classification

#### **Classification**

FLAMMABLE AEROSOLS - Category 1  
GASES UNDER PRESSURE - Compressed gas  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
ASPIRATION HAZARD - Category 1

#### **Justification**

On basis of test data  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method

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## Section 16. Other information

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

### Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

*Date of issue*/*Date of revision* : 10/28/2016 *Date of previous issue* : 10/13/2016 *Version* : 3.04 14/14

# MATERIAL SAFETY DATA SHEET

03408  
01 00

DATE OF PREPARATION  
Aug 11, 2015

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NUMBER**

03408

**PRODUCT NAME**

KRYLON® QUIK-MARK™ Water-Based Inverted Marking Paint (Fluorescent), Fluorescent Orange

**MANUFACTURER'S NAME**

THE SHERWIN-WILLIAMS COMPANY  
KRYLON INDUSTRIAL PRODUCTS GROUP  
Cleveland, OH 44115

**Telephone Numbers and Websites**

<b>Product Information</b>	(800) 247-3266 www.kpg-industrial.com
<b>Regulatory Information</b>	(216) 566-2902 www.paintdocs.com
<b>Medical Emergency</b>	(216) 566-2917
<b>Transportation Emergency*</b>	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
10	74-98-6	<b>Propane</b>		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	1000 PPM	
4	106-97-8	<b>Butane</b>		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	800 PPM	
1	64742-89-8	<b>Lt. Aliphatic Hydrocarbon Solvent</b>		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
8	64742-88-7	<b>Med. Aliphatic Hydrocarbon Solvent</b>		
		ACGIH TLV	100 PPM	1.27 mm
		OSHA PEL	100 PPM	
10	108-88-3	<b>Toluene</b>		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	

## SECTION 3 — HAZARDS IDENTIFICATION

**ROUTES OF EXPOSURE**

INHALATION of vapor or spray mist.  
EYE or SKIN contact with the product, vapor or spray mist.

**EFFECTS OF OVEREXPOSURE**

**EYES:** Irritation.  
**SKIN:** Prolonged or repeated exposure may cause irritation.  
**INHALATION:** Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.  
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system
- the cardiovascular system
- the reproductive system

**SIGNS AND SYMPTOMS OF OVEREXPOSURE**

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

**HMIS Codes**

<b>Health</b>	2
<b>Flammability</b>	2
<b>Reactivity</b>	0

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

None generally recognized.

#### **CANCER INFORMATION**

For complete discussion of toxicology data refer to Section 11.

### **SECTION 4 — FIRST AID MEASURES**

**EYES:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.

**SKIN:** Wash affected area thoroughly with soap and water.

Remove contaminated clothing and laundry before re-use.

**INHALATION:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.

**INGESTION:** Do not induce vomiting. Get medical attention immediately.

### **SECTION 5 — FIRE FIGHTING MEASURES**

#### **FLASH POINT**

Propellant < 0 °F

#### **LEL**

0.9

#### **UEL**

9.5

#### **EXTINGUISHING MEDIA**

Carbon Dioxide, Dry Chemical, Alcohol Foam

#### **UNUSUAL FIRE AND EXPLOSION HAZARDS**

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

#### **SPECIAL FIRE FIGHTING PROCEDURES**

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

### **SECTION 6 — ACCIDENTAL RELEASE MEASURES**

#### **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

### **SECTION 7 — HANDLING AND STORAGE**

#### **STORAGE CATEGORY**

Not Available

#### **PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE**

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

### **SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **PRECAUTIONS TO BE TAKEN IN USE**

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (respirable fraction).

#### **VENTILATION**

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

#### **RESPIRATORY PROTECTION**

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

#### **PROTECTIVE GLOVES**

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

**EYE PROTECTION**

Wear safety spectacles with unperforated sideshields.

**OTHER PRECAUTIONS**

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

<b>PRODUCT WEIGHT</b>	7.19 lb/gal	861 g/l
<b>SPECIFIC GRAVITY</b>	0.87	
<b>BOILING POINT</b>	<0 - 395 °F	<-18 - 201 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	95%	
<b>EVAPORATION RATE</b>	Faster than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>pH</b>	> 2.0, < 11.5	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
	Volatile Weight 33.14%	Less Water and Federally Exempt Solvents

**SECTION 10 — STABILITY AND REACTIVITY****STABILITY — Stable****CONDITIONS TO AVOID**

None known.

**INCOMPATIBILITY**

None known.

**HAZARDOUS DECOMPOSITION PRODUCTS**

By fire: Carbon Dioxide, Carbon Monoxide

**HAZARDOUS POLYMERIZATION**

Will not occur

**SECTION 11 — TOXICOLOGICAL INFORMATION****CHRONIC HEALTH HAZARDS**

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

**TOXICOLOGY DATA**

CAS No.	Ingredient Name			
74-98-6	Propane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-89-8	Lt. Aliphatic Hydrocarbon Solvent	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-88-7	Med. Aliphatic Hydrocarbon Solvent	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg

**SECTION 12 — ECOLOGICAL INFORMATION****ECOTOXICOLOGICAL INFORMATION**

No data available.

**SECTION 13 — DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHOD**

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

## SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

### US Ground (DOT)

May be classed as LTD. QTY. OR ORM-D  
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

### Canada (TDG)

May be classed as LTD. QTY. OR ORM-D  
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

### IMO

May be shipped as Limited Quantity  
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, EmS F-D, S-U

### IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

## SECTION 15 — REGULATORY INFORMATION

### SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	10	

### CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

### TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

## SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



# SAFETY DATA SHEET

## 1. IDENTIFICATION

Product name: LA's Totally Awesome Bleach (Various Fragrances)

### Additional identification

Chemical name: Water based Mixture  
Product is designed, packaged and labeled for consumer use per USCPSC guidelines.  
Consumer container size ranges from 64 to 128 Fl oz

### Recommended use and restriction on use

Recommended use: Laundry and Household Bleach  
Restrictions on use: Follow Label Directions.

### Responsible Party

Company Name: AWESOME PRODUCTS, INC.  
Address: 6370 Altura Blvd  
Buena Park, CA 90620 USA  
Telephone: 1-800-482-2875

Emergency telephone number: 1-714-562-8873

## 2. HAZARD(S) IDENTIFICATION

Hazard Classification Considered hazardous under 2012 OSHA Hazard Communication Standard

### Health Hazards

Harmful in contact with skin  
Causes Serious Eye Damage/Eye Irritation Category 2A  
May be harmful if inhaled (aspirated)

### Toxicity

Acute toxicity values for, oral dermal or inhalation are not known however this product is thought to be relatively non-toxic when used in accordance with label instructions. It does not contain any chemicals subject to the reporting requirements of SARA Section 313 (40 CFR 372).

### Label Elements

#### Hazard Symbol



#### Signal Word

Warning

# SAFETY DATA SHEET

LA's Totally Awesome Bleach (Various Fragrances)

## Precautionary Statement:

- Prevention:** Wash thoroughly after handling. Wear protective eyewear Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use additional personal protective equipment as required.
- Response:** If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention immediately if ingested or aspirated call a POISON CENTER (1-800-222-1222) or consult a doctor. See product label for specific treatment. Remove contaminated clothing and laundry before reuse.
- Storage:** Store in closed containers in restricted location.
- Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws, regulations, and product characteristics at time of disposal.

**Other hazards not resulting in GHS classification:** None identified.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS number	Percent by Weight
Sodium Hypochlorite	CAS# 7681-52-9	3%
Water	CAS# 7732-18-5	96-97%
Fragrance (scented versions only)	Fragrance per EPA list	0-1%

**Trade secret information:** We reserve the right to withhold specific chemical identities and/or percentages of composition as trade secrets.

## 4. FIRST-AID MEASURES

- General information:** IF exposed or concerned: Get prompt medical advice/attention.
- Ingestion:** Rinse mouth. Get medical attention if symptoms occur.
- Inhalation:** Remove exposed person to fresh air if adverse effects are observed.
- Skin Contact:** Take off contaminated clothing and laundry before re-use. Wash skin thoroughly with soap and water. If skin irritation occurs, get medical attention.
- Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER (1-800-222-1222 in USA) or doctor/physician.

# SAFETY DATA SHEET

LA's Totally Awesome Bleach (Various Fragrances)

## Most important symptoms/effects, acute and delayed:

**Symptoms:** Symptoms may be delayed.

## Immediate Medical Attention and Special Treatment Requirements:

**Treatment:** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**General Fire Hazards:** Product is water based, No unusual fire or explosion hazards noted.

### Extinguishing Media:

**Suitable** Appropriate to primary fire source. Product will tolerate CO<sub>2</sub>, dry chemical, foam, water spray, water fog.

**Unsuitable:** Avoid water reactive media.

**Specific hazards:** Material will not burn until water has boiled off or evaporated. When heated hazardous gases may be released including carbon monoxide, Closed containers may rupture on heating.

### Special Protective Equipment and Precautions for Firefighters

**Special procedures:** Dike runoff areas to avoid release to storm sewers or navigable waterways.

**Special protective equipment:** Wear full protective fire gear including self-containing breathing apparatus operated in the positive pressure mode with full face piece, coat, pants, gloves and boots for all fires involving chemicals.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Do not handle damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. Ventilate area if spilled in confined space or other poorly ventilated areas. Personal Protective Equipment must be worn,

**Methods and material for containment and cleaning up:** Dike spillage area for later recovery and disposal. Pick up free liquid for recycle and/or disposal. Residual liquid can be absorbed on inert material. Wash area with soap and water. Spilled liquid and dried film are slippery. Use care to avoid falls. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas.

**Environmental Precautions:** Avoid release to the environment. Do not contaminate water sources or allow to enter storm sewer. Safely prevent further spillage.



# SAFETY DATA SHEET

LA's Totally Awesome Bleach (Various Fragrances)

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not get in eyes. Avoid contact with skin. Observe good industrial hygiene practices. Provide adequate ventilation. Use personal protective equipment as required. Wash hands thoroughly after handling. Launder contaminated clothing before reuse. Avoid environmental contamination. Avoid breathing mists or vapors. When using do not eat, drink or smoke. Keep containers closed when not in use.

**Handling Temperature:** Ambient indoor storage. Do not allow to freeze.

**Conditions for safe storage, including any incompatibilities:** Store away from water reactive, acidic and other incompatible materials. Do not store in open, unlabeled or mislabeled containers. Keep away from children.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters:**

**Occupational Exposure Limits**

Chemical name	Type	Exposure Limits	Source of Information
Sodium Hypochlorite		N/A	NIOSH ICSC: 0482

**Engineering Controls:** Use material in well ventilated area only. Adequate ventilation should be provided. Mechanical ventilation or local exhaust ventilation may be required.

**Individual Protection Measures:**

**General information:** Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Eye/face protection:** Wear tight-fitting goggles or face shield.

**Skin Protection:**

**Hand Protection:** Use good industrial hygiene practices to limit or avoid skin contact. If contact may occur wear chemically protective gloves

**Other skin protection:** Wear apron or protective clothing in case of contact. Do not wear rings, watches or similar apparel that could entrap the material.

# SAFETY DATA SHEET

## LA's Totally Awesome Bleach (Various Fragrances)

**Respiratory Protection:** Under normal use conditions, respirator is not usually required. Use appropriate respiratory protection if exposure to mist or vapors is likely. Use self-contained breathing apparatus for entry into confined space, for other poorly ventilated areas and for large spill clean-up sites.

**Hygiene measures:** Observe good industrial hygiene practices. Do not get in eyes. Avoid contact with skin. Wash contaminated clothing before reuse. Wash hands before breaks and immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance

**Physical state:** Liquid  
**Color:** Clear – Slightly yellow  
**Odor:** Characteristic (Chlorine)  
**Odor threshold:** No data available.

#### Chemical Properties

**pH Range:** 10-11 (Moderately Alkaline)  
**Freezing point:** Approximately that of water  
**Boiling Point:** Approximately that of water  
**Flash Point:** Boils without Flashing)  
**Evaporation rate:** Approximately that of water  
**Flammability (solid, gas):**  
**Upper limit - upper (%):** Not Flammable.  
**Lower limit - lower (%):** Not Flammable.  
**Explosive limit - upper (%):** Not Explosive  
**Explosive limit - lower (%):** Not Explosive.  
**Vapor pressure:** Approximately that of water  
**Vapor density:** Approximately that of water vapor  
**Relative density:** 1.05 @70°F  
**Solubility**  
**In water:** Miscible  
**Other:**  
**Auto-ignition temperature:** Not Flammable  
**Decomposition temperature:** Boils without decomposing.  
**Viscosity:** Similar to that of water.  
**Other information**  
**Bulk density:** 8.7 lb/gal  
**Percent Non-Volatile Solids:** Approximately 3 %  
**Volatile Organic Compounds (VOC):** Less than 2%

# SAFETY DATA SHEET

LA's Totally Awesome Bleach (Various Fragrances)

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Reacts with acidic household chemical such as toilet bowl cleaners, and rust removers, or ammonia containing products producing chlorine and other hazardous gases. Prolonged contact with metal may cause pitting or discoloration
<b>Hazardous Polymerization:</b>	Not expected to occur.
<b>Conditions to Avoid:</b>	Do not freeze or blend with other household chemicals.
<b>Incompatible Materials:</b>	Strong acids and ammonia containing chemicals.
<b>Hazardous Decomposition Products:</b>	Thermal decomposition or combustion following loss of water content may liberate carbon oxides, chlorine gas and other toxic gases or vapors.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Inhalation:</b>	Avoid inhaling fumes or mist.
<b>Ingestion:</b>	Do not swallow.
<b>Skin Contact:</b>	Causes skin irritation. Immediately wash off with water if exposed.
<b>Eye contact:</b>	Causes serious eye damage.

### Information on toxicological effects

#### Acute Toxicity

<b>Oral:</b>	Swallowing material may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain. Swallowing this material causes irritation of mouth, esophagus and stomach, with nausea, vomiting, diarrhea and abdominal pain. Seek immediate medical attention.
<b>Dermal:</b>	Not classified for acute toxicity based on available data.
<b>Inhalation:</b>	Avoid inhalation of mists or vapors. Not classified for acute toxicity based on available data.
<b>Skin Corrosion/Irritation:</b>	Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, and cracking of the skin.
<b>Serious Eye Damage/Eye Irritation:</b>	Mist may cause irritation. Causes serious eye damage.
<b>Respiratory sensitization:</b>	No data available
<b>Skin sensitization:</b>	Not a skin sensitizer.
<b>Specific Target Organ Toxicity - Single Exposure:</b>	Mist or vapors may cause irritation of upper respiratory tract.

# SAFETY DATA SHEET

LA's Totally Awesome Bleach (Various Fragrances)

**Aspiration Hazard:** No data available

## Chronic Effects

**Carcinogenicity:** It is not anticipated that the hazard of carcinogenicity will result from workplace exposure to this product or its solutions.

### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Not classifiable as to carcinogenicity to humans.

### U.S. National Toxicology Program (NTP) Report on Carcinogens:

See section 8 of this SDS

### U.S. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

See section 8 of this SDS

## Germ Cell Mutagenicity:

2-Butoxyethanol There is limited evidence that this material may damage the developing fetus.

## Reproductive Toxicity:

2-Butoxyethanol There is limited evidence that this material may affect the male reproductive system (decreased sperm count) in humans and female fertility in animals.

## .Specific Target Organ Toxicity - Repeated Exposure:

Prolonged or repeated skin contact product mixture may cause dermatitis with redness, edema, drying, and cracking of the skin.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Toxic to aquatic life. Waste from normal product use may be disposed of in an EPA Permitted Publicly Owned Treatment Works (POTW) in compliance with applicable Federal / Provincial / State / Local / Municipal pretreatment requirements or a qualified Septic system.

## 13. DISPOSAL CONSIDERATIONS

**Disposal instructions:** Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Dispose of packaging or containers in accordance with local, regional, national and international regulations. Empty container contains product residue which may exhibit hazards of product. Do not use combustible absorbents such as saw dust.

**Used Packaging:** Container packaging may exhibit residual hazards.

**California Waste Code:** H075 (Chemical Oxidants)

# SAFETY DATA SHEET

LA's Totally Awesome Bleach (Various Fragrances)

## 14. TRANSPORT INFORMATION

### DOT

UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

### IMDG

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (SODIUM HYPOCHLORITE), 9, III MARINE POLLUTANT.

Shipping descriptions may vary based on mode of transport, quantities, temperature of the material, package size, and/or origin and destination. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material. Review classification requirements before shipping materials at elevated temperatures.

## 15. REGULATORY INFORMATION

### US Federal Regulations

#### Toxic Substances Control Act (TSCA)

The ingredients in this product are listed or are exempt from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

This product is listed in SARA 302 as an Acute Health Hazard

### US State Regulations

#### California Proposition 65

This product does not contain chemical(s) known to the state of California to cause cancer and/or birth defects.

#### Right to Know

Sodium Hypochlorite is listed on the Hazardous Substance and Special Health Hazard Substance lists in the states of New Jersey, Massachusetts, Pennsylvania and Rhode Island...

### Canadian Regulations

Sodium Hypochlorite is listed as a Toxic Material (WHMIS Hazard Class D2B) - per Canada's CEPA Environmental Toxic Substances List

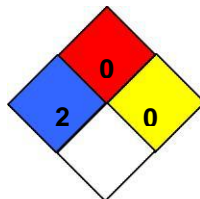
# SAFETY DATA SHEET

LA's Totally Awesome Bleach (Various Fragrances)

## 16. OTHER INFORMATION

### HMIS Hazard ID

Hazard rating scale: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; \*Chronic health effect\*



Flammability: 0 - Minimal  
Health: 2 - Moderate  
Physical Hazards: 0 - Minimal

This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained herein. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

# SAFETY DATA SHEET

Lysol® Brand Disinfectant Spray, All Scents (Aerosol)



HEALTH • HYGIENE • HOME

## 1. Product and company identification

- Product name** : Lysol® Brand Disinfectant Spray, All Scents (Aerosol)
- Supplier** : Reckitt Benckiser (Canada) Inc.  
1680 Tech Avenue, Unit #2  
Mississauga, Ontario L4W 5S9  
CANADA  
Telephone: +1 905 283 7000
- Material uses** : Multipurpose Cleaner
- Product use** : Consumer
- SDS #** : D0224478 v5.0
- Formulation #:** : 1178-172 (0175917 v1.0 & 0242193 v2.0) Crisp Linen  
1338-015 (0175918 v1.0 & 0258756 v1.0) Spring Waterfall  
1338-018 (0175934 v1.0) Green Apple / Green Apple Breeze  
1338-021 (0175938 v1.0) Crisp Berry  
1338-019 (0175919 v1.0) Country  
1338-026 (0175929 v1.0) Country Morning Breeze  
1338-017 (0172927 v1.0) Lemon Breeze
- DIN #** : 02395614
- UPC Code / Sizes** : Tin plate steel cans  
Crisp Linen - 6 oz, 12.5 oz, 19 oz, 350g  
"To Go" Crisp Linen - 1 oz, 28 g  
Spring Waterfall - 12.5 oz, 19 oz, 350g  
Green Apple - 350g  
Crisp Berry - 12.5 oz, 19 oz, 350g  
Country - 350g  
Country Morning Breeze - 350g  
Lemon Breeze - 200g, 350g and 539g
- Manufacturer** : Reckitt Benckiser LLC.  
Morris Corporate Center IV  
399 Interpace Parkway (P.O. Box 225)  
Parsippany, New Jersey 07054-0225  
+1 973 404 2600
- Validation date** : 23/04/2015.
- Emergency telephone number** : 1-800-338-6167
- Transport Emergency phone:** : 1-800-424-9300 (U.S. & Canada) CHEMTREC  
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

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## 2. Hazards identification

### Emergency overview

- Physical state** : Liquid. [Aerosol.]
- Color** : Clear.
- Odor** : Characteristic.
- Signal word:** : DANGER
- Hazard statements** : EXTREMELY FLAMMABLE.  
CONTAINER MAY EXPLODE IF HEATED
- Precautionary measures** : Keep out of reach of children. CONTENTS UNDER PRESSURE. Keep away from flames or sparks. Do not puncture, incinerate or store the container at temperatures above 120°F or in direct sunlight. Use only with adequate ventilation. Avoid contact with eyes and Food. Wash thoroughly after handling.
- OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### Potential acute health effects

- Skin** : Slightly irritating to the skin.
- Eyes** : Moderately irritating to eyes.

### Potential chronic health effects

- Chronic effects** : Contains material that may cause target organ damage, based on animal data.
- Carcinogenicity** : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.
- Target organs** : Contains material which may cause damage to the following organs: blood, lungs, the reproductive system, liver, heart, upper respiratory tract, skin, eyes, central nervous system (CNS).

### Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Eyes** : Adverse symptoms may include the following:  
irritation  
redness
- Medical conditions aggravated by over-exposure** : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

**Hazard statements** :

## 3. Composition/information on ingredients

Name	CAS number	%
Ethanol	64-17-5	30 - 60
n-butane	106-97-8	5 - 10
Propane	74-98-6	1 - 2.5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**



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## 4. First aid measures

### First aid

- Eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : Use personal protective equipment as required.
- Notes to physician** : Contains denatured ethanol; ingestion may result in ethanol poisoning.

## 5. Fire-fighting measures

- Flammability Remark** : Not available.
- Explosibility Remark** : Not available.
- Flammability of the product** Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.
- Extinguishing media**
- Suitable** Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** None known.
- Special hazards arising from the substance or mixture**
- Special exposure hazards** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Hazardous thermal decomposition products** Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide
- NFPA (30B) aerosol Flammability** Level 1
- Fire or projection hazard.** Aerosol cans may explode with extreme heat and become projectiles.
- Advice for firefighters**
- Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Special remarks on explosion hazards**
- Sensitivity to mechanical impact** Not available.
- Sensitivity to static discharge** Not available.

## 6. Accidental release measures

**Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods for cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## 7. Handling and storage

**Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Empty containers retain product residue and can be hazardous.

Do not puncture or incinerate CONTENTS UNDER PRESSURE

**Storage** : Do not store above the following temperature: 50°C (120°F). Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

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## 7. Handling and storage

CONTAINERS SHOULD BE KEPT OUT OF REACH OF CHILDREN. Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn after use. Keep away from all sources of ignition. Fires involving flammable aerosols are severe and can spread very quickly. Warehouses and stores containing aerosols should therefore be separated from other areas by a fire resistant construction of at least one half hour duration. Stores should be well ventilated, particularly at low levels. The natural ventilation in a large open warehouse building will normally be suitable. Avoid the storage of aerosols in basements where practicable.

**EPA Product** : It is a violation of federal law to use this product in a manner inconsistent with its labeling.

## 8. Exposure controls/personal protection

<u>Occupational exposure limits</u>		TWA (8 hours)			STEL (15 mins)			Ceiling (ACGIH TLV)			Notations
Ingredient	List name	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	ppm	mg/m <sup>3</sup>	Other	
butane	US ACGIH 6/2013	-	-	-	1000	-	-	-	-	-	
	AB 4/2009	1000	-	-	-	-	-	-	-	-	
	BC 7/2013	600	-	-	750	-	-	-	-	-	
	ON 1/2013	800	-	-	-	-	-	-	-	-	
	QC 12/2012	800	1900	-	-	-	-	-	-	-	
ethanol	US ACGIH 6/2013	-	-	-	1000	-	-	-	-	-	
	AB 4/2009	1000	1880	-	-	-	-	-	-	-	
	BC 7/2013	-	-	-	1000	-	-	-	-	-	
	ON 1/2013	-	-	-	1000	-	-	-	-	-	
	QC 12/2012	1000	1880	-	-	-	-	-	-	-	
propane	AB 4/2009	1000	-	-	-	-	-	-	-	-	
	BC 7/2013	1000	-	-	-	-	-	-	-	-	
	ON 1/2013	1000	-	-	-	-	-	-	-	-	
	QC 12/2012	1000	1800	-	-	-	-	-	-	-	

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### Manufacturer: Exposure controls

**Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

## 8. Exposure controls/personal protection

### Personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.  
When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Other protection** : Not available.

## 9. Physical and chemical properties

- Physical state** : Liquid. [Aerosol.]
- Flash point** : Closed cup: 25.6°C (78.1°F)
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Auto-ignition temperature** : Not available.
- Flammable limits** : Not available.
- Color** : Clear.
- Odor** : Characteristic.
- Taste** : Not available.
- Molecular weight** : Not applicable.
- Molecular formula** : Not applicable.
- pH** : 10.8 to 11.8 [Conc. (% w/w): 100%]
- Boiling/condensation point** : Not available.
- Melting/freezing point** : Not available.
- Critical temperature** : Not available.
- Relative density (g/ml)** : 0.8667 to 0.8967 g/cm<sup>3</sup> [20 to 25°C]
- Bulk density** : 7.1 to 7.5 lbs/gal
- Vapor pressure** : Not available.

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## 9. Physical and chemical properties

<b>Vapor density</b>	: Not available.
<b>Volatility</b>	: Not available.
<b>Odor threshold</b>	: Not available.
<b>Evaporation rate</b>	: Not available.
<b>SADT</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Ionicity (in water)</b>	: Not available.
<b>Dispersibility properties</b>	: Not available.
<b>Solubility</b>	: Easily soluble in the following materials: cold water and hot water.
<b>Physical/chemical properties comments</b>	: Not available.
<b>Aerosol product</b>	
<b>Type of aerosol</b>	: Spray
<b>Heat of combustion</b>	: 21.41 kJ/g
<b>Ignition distance</b>	: <45.72 cm

## 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Keep away from extreme heat. Protect from moisture. Keep from freezing. Do not store above 50°C
<b>Incompatible materials</b>	: Do not mix with household chemicals.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.

## 11. Toxicological information

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
butane	LC50 Inhalation Vapor	Rat	658000 mg/m <sup>3</sup>	4 hours
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	7 g/kg	-
*Lysol® Brand Disinfectant Spray, All Scents (Aerosol)	LC50 Inhalation Vapor	Rat	>2.12 mg/l	4 hours Maximum attainable concentration

**Conclusion/Summary** : Not classified Harmful. \*Information is based on toxicity test result of the concentrate of a similar product.

### Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

**Conclusion/Summary** : Not available.

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## 11. Toxicological information

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	100 microliters	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
				400 milligrams	-
*Lysol® Brand Disinfectant Spray, All Scents (Aerosol)	Eyes - Cornea opacity	Rabbit	< 1	24 hours	-
	Skin - Primary dermal irritation index (PDII)	Rabbit	0.3	20 milligrams	4 days
				72 hours	72 hours

**Conclusion/Summary** : Not available.

**Skin** : Slightly irritating to the skin. \*Information is based on toxicity test result of the concentrate of a similar product.

**Eyes** : Moderately irritating to eyes. \*Information is based on toxicity test result of the concentrate of a similar product.

**Respiratory** : Not available.

### Sensitizer

Product/ingredient name	Route of exposure	Species	Result
Not available.			

**Conclusion/Summary** : Not available.

**Skin** : Not available.

**Respiratory** : Not available.

### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

**Conclusion/Summary** : Not available.

### Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
ethanol	A3	1	-	-	-	-

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Not available.			

**Conclusion/Summary** : Not available.

### Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Not available.				

**Conclusion/Summary** : Not available.

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## 11. Toxicological information

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Not available.						

**Conclusion/Summary** : Not available.

## 12. Ecological information

**Ecotoxicity** : No known significant effects or critical hazards.

### Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

**Conclusion/Summary** : Not available.

### Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Not available.				

**Conclusion/Summary** : Not available.

**Partition coefficient: n-octanol/water** : Not available.

**Bioconcentration factor** : Not available.

**Mobility** : Not available.

**Toxicity of the products of biodegradation** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## 13. Disposal considerations






**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

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## 14. Transport information

For long distance transport of bulk material or shrunk pallet take into consideration sections 7 and 10.

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
TDG Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
Mexico Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IMDG Class	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-		See DG List

PG\* : Packing group

## 15. Regulatory information

### United States

**U.S. Federal regulations** : TSCA 8(a) PAIR: 2-methylpropan-2-ol  
 SARA 302/304: No products were found.  
 SARA 311/312 Hazards identification: Fire hazard, Delayed (chronic) health hazard  
 Clean Water Act (CWA) 311: ammonia  
 Clean Air Act (CAA) 112 regulated flammable substances: butane; propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

### SARA 311/312 HCS 1994

Classification : Fire hazard  
 Delayed (chronic) health hazard

### Composition/information on ingredients



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## 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
butane	5 - 10	Yes.	Yes.	No.	No.	Yes.
ethanol	30 - 60	Yes.	No.	No.	Yes.	Yes.
propane	1 - 2.5	Yes.	Yes.	No.	No.	Yes.

### State regulations

- Massachusetts** : The following components are listed: ETHYL ALCOHOL; BUTANE; PROPANE
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: ETHYL ALCOHOL; ALCOHOL; BUTANE; PROPANE
- Pennsylvania** : The following components are listed: DENATURED ALCOHOL; BUTANE; PROPANE

### Canada

- WHMIS (Canada)** : Class B-2: Flammable liquid  
Class B-5: Flammable aerosol.

### Canadian lists

- Canadian NPRI** : The following components are listed: Ethanol; Butane (all isomers); Propane
- CEPA Toxic substances** : None of the components are listed.
- Canada inventory** : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

## 16. Other information

**Hazardous Material Information System (U.S.A.)** :

Health	1
Flammability	3
Physical hazards	0
Personal protection	B

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

**National Fire Protection Association (U.S.A.)** :



NFPA (30B) aerosol Flammability Level 1

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## 16. Other information

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

**Date of issue** : 23/04/2015.  
**Date of previous issue** : 22/04/2015.  
**Version** : 5  
**Prepared by** : Reckitt Benckiser LLC.  
Product Safety Department  
1 Philips Parkway  
Montvale, New Jersey 07646-1810 USA.  
FAX: 201-476-7770

**Revision comments** : Update & Revision of the SDS. Addition of formula #0175927.

✔ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)



## SECTION 1: Identification

**Product Identifier:** Megaplex® XD5  
**Other means of identification:** Megaplex® XD5 No. 0  
Megaplex® XD5 No. 1  
Megaplex® XD5 No. 1W  
Megaplex® XD5 No. 2  
**SDS Number:** 778587  
**Relevant identified uses:** Lubricating Grease  
**Uses Advised Against:** All others  
**24 Hour Emergency Phone Number:** CHEMTREC 800-424-9300 (24 Hours)  
CANUTEC 613-996-6666

**Manufacturer/Supplier:**  
Phillips 66 Lubricants  
P.O. Box 4428  
Houston, TX 77210

**SDS Information:**  
Phone: 800-762-0942  
Email: SDS@P66.com  
URL: www.Phillips66.com

**Customer Service:**  
U.S.: 800-368-7128 or International: 1-832-765-2500  
**Technical Information:** 1-877-445-9198

## SECTION 2: Hazard identification

**Classified Hazards**  
H320 -- Eye damage/irritation -- Category 2B

**Other Hazards**  
None Known

### Label Elements

#### WARNING

Causes eye irritation

Wash skin thoroughly after handling; IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing; If eye irritation persists: Get medical advice/attention

## SECTION 3: Composition/information on ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Lubricant Base Oil (Petroleum)	VARIOUS	70-90
Molybdenum (IV) sulfide	1317-33-5	3-7
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	1-2
Non-Hazardous Materials	VARIOUS	10 - 30

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION 4: First aid measures

**Eye Contact:** For direct contact, remove contact lenses if present and easy to do. Immediately hold eyelids apart and flush the affected eye(s) with clean water for at least 15 minutes. Seek immediate medical attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician. (see Note to Physician)

**Inhalation (Breathing):** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion (Swallowing):** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Dry skin and possible irritation with repeated or prolonged exposure.

**Notes to Physician:** When using high-pressure equipment, injection of product under the skin can occur. In this case, the casualty should be sent immediately to the hospital. Do not wait for symptoms to develop. High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. These injuries often require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury. Early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

## SECTION 5: Firefighting measures

### NFPA 704 Hazard Class

Health: 1 Flammability: 1 Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

### **Specific hazards arising from the chemical**

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

**Special protective actions for firefighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

## SECTION 7: Handling and storage

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

## SECTION 8: Exposure controls/personal protection

Chemical Name	ACGIH	OSHA	Other
Molybdenum (IV) sulfide	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	---
Lubricant Base Oil (Petroleum)	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	TWA: 5mg/m <sup>3</sup> as Oil Mist, if Generated	---

**Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.**

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z.87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile

**Respiratory Protection:** Respiratory protection is not normally required under intended conditions of use. Emergencies or conditions that could result in significant airborne exposures may require the use of NIOSH approved respiratory protection. An industrial hygienist or other appropriate health and safety professional should be consulted for specific guidance under these situations.

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

## SECTION 9: Physical and chemical properties

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

**Appearance:** Moly Gray  
**Physical Form:** Semi-Solid  
**Odor:** Petroleum  
**Odor Threshold:** No data  
**pH:** Not applicable  
**Vapor Density (air=1):** > 5  
**Upper Explosive Limits (vol % in air):** No data  
**Lower Explosive Limits (vol % in air):** No data  
**Evaporation Rate (nBuAc=1):** <1  
**Particle Size:** Not applicable  
**Percent Volatile:** No data  
**Flammability (solid, gas):** Not applicable

**Flash Point:** > 300 °F / > 149 °C  
**Test Method:** Cleveland Open Cup (COC), ASTM D92  
**Initial Boiling Point/Range:** No data  
**Vapor Pressure:** <0.1 mm Hg  
**Partition Coefficient (n-octanol/water) (Kow):** No data  
**Melting/Freezing Point:** No data  
**Auto-ignition Temperature:** No data  
**Decomposition Temperature:** No data  
**Specific Gravity (water=1):** 0.95 @ 60°F (15.6°C)  
**Bulk Density:** 7.96 lbs/gal  
**Viscosity:** N/D  
**Solubility in Water:** Insoluble

## SECTION 10: Stability and reactivity

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**Incompatible materials:** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use.

## SECTION 11: Toxicological information

### Information on Toxicological Effects of Substance/Mixture

#### Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated);
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** Not expected to be an aspiration hazard.

**Skin Corrosion/Irritation:** Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Causes eye irritation.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific Target Organ Toxicity (Repeated Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

#### Information on Toxicological Effects of Components

##### Lubricant Base Oil (Petroleum)

*Carcinogenicity:* The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

## SECTION 12: Ecological information

**GHS Classification:**  
**No classified hazards**

**Toxicity:** All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

**Persistence and Degradability:** The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

**Bioaccumulative Potential:** Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

**Mobility in Soil:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

**Other adverse effects:** None anticipated.

## SECTION 13: Disposal considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

## SECTION 14: Transport information

### U.S. Department of Transportation (DOT)

**Shipping Description:**

*Not regulated*

**Note:**

*If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)*

### International Maritime Dangerous Goods (IMDG)

**Shipping Description:**

*Not regulated*

**Note:**

*U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.*

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not applicable

### International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

**UN/ID #:** Not regulated  
**Note:** U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.

	LTD. QTY	Passenger Aircraft	Cargo Aircraft Only
<b>Packaging Instruction #:</b>	---	---	---
<b>Max. Net Qty. Per Package:</b>	---	---	---

**SECTION 15: Regulatory information**

**CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):**  
 This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

**CERCLA/SARA - Section 311/312 (Title III Hazard Categories)**

**Acute Health Hazard:** Yes  
**Chronic Health Hazard:** No  
**Fire Hazard:** No  
**Pressure Hazard:** No  
**Reactive Hazard:** No

**CERCLA/SARA - Section 313 and 40 CFR 372:**  
 This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

Chemical Name	Concentration <sup>1</sup>	de minimis
Zinc Compound(s)	1-2	1.0%

**EPA (CERCLA) Reportable Quantity (in pounds):**  
 This material does not contain any chemicals with CERCLA Reportable Quantities.

**California Proposition 65:**  
 Warning: This material may contain detectable quantities of the following chemicals, known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the warning requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Chemical Name	Type of Toxicity
1-Methyl-2-pyrrolidone	Developmental Toxicant

**Canada:**  
 This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

**WHMIS Hazard Class:**  
 D2B - Toxic materials

**National Chemical Inventories**  
 All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.  
 All components are either on the DSL, or are exempt from DSL listing requirements.

**U.S. Export Control Classification Number:** EAR99

**SECTION 16: Other information**

Date of Issue:	Previous Issue Date:	SDS Number:	Status:
19-Dec-2014	04-Feb-2013	778587	FINAL

**Revised Sections or Basis for Revision:**  
 Composition (Section 3); Toxicological (Section 11); Environmental hazards (Section 12)

**Precautionary Statement(s):**  
 P264 - Wash skin thoroughly after handling  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing



**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

**Disclaimer of Expressed and implied Warranties:**

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200), Health Canada HPR (SOR/2015-17), and Mexico NOM-018-STPS-2015



## SECTION 1: Identification

**Product Identifier** Megaplex® XD5 Grease

**Other means of identification**

Phillips 66 Megaplex® XD5 Grease #0  
Phillips 66 Megaplex® XD5 Grease #1  
Phillips 66 Megaplex® XD5 Grease #1W  
Phillips 66 Megaplex® XD5 Grease #2

**Code**

**LBPH778587**

**Relevant identified uses**

Lubricating Grease

**Uses advised against**

All others

**24 Hour Emergency Phone Number**

CHEMTREC 1-800-424-9300

CHEMTREC México 01-800-681-9531

**Manufacturer/Supplier**

Phillips 66 Lubricants  
P.O. Box 4428  
Houston, TX 77210

**SDS Information**

URL: [www.Phillips66.com](http://www.Phillips66.com)  
Phone: 800-762-0942  
Email: [SDS@P66.com](mailto:SDS@P66.com)

**Customer Service**

U.S.: 800-368-7128 or International: 1-832-765-2500

**Technical Information**

1-877-445-9198

## SECTION 2: Hazard identification

**Classified Hazards**

No classified hazards

**Hazards Not Otherwise Classified (HNOC)**

PHNOC: None known

HHNOC: None known

**Label Elements**

No classified hazards

## SECTION 3: Composition/information on ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Distillates, petroleum, solvent-dewaxed heavy paraffinic	64742-65-0	15 - 40

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION 4: First aid measures

**Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention. If product is injected into or

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Status: FINAL

under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician. (see Note to Physician)

**Inhalation:** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion:** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Prolonged or repeated contact may dry skin and cause irritation

**Notes to Physician:** When using high-pressure equipment, injection of product under the skin can occur. In this case, the casualty should be sent immediately to the hospital. Do not wait for symptoms to develop. High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. These injuries often require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury. Early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

## SECTION 5: Firefighting measures

### NFPA 704 Hazard Class

Health: 0 Flammability: 1 Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

**Special protective actions for fire-fighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on

the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

## SECTION 7: Handling and storage

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

## SECTION 8: Exposure controls/personal protection

Chemical Name	ACGIH	OSHA	Mexico	Phillips 66
Distillates, petroleum, solvent-dewaxed heavy paraffinic	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	---	---	---

**Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.**

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile

**Respiratory Protection:** Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

**SECTION 9: Physical and chemical properties**

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

<b>Appearance:</b> Moly Gray	<b>Flash Point:</b> 300 °F / 149 °C
<b>Physical Form:</b> Semi-Solid	<b>Test Method:</b> Cleveland Open Cup (COC), ASTM D92
<b>Odor:</b> Petroleum	<b>Initial Boiling Point/Range:</b> No data
<b>Odor Threshold:</b> No data	<b>Vapor Pressure:</b> <1 mm Hg
<b>pH:</b> Not applicable	<b>Partition Coefficient (n-octanol/water) (Kow):</b> No data
<b>Vapor Density (air=1):</b> > 5	<b>Melting/Freezing Point:</b> No data
<b>Upper Explosive Limits (vol % in air):</b> No data	<b>Auto-ignition Temperature:</b> No data
<b>Lower Explosive Limits (vol % in air):</b> No data	<b>Decomposition Temperature:</b> No data
<b>Evaporation Rate (nBuAc=1):</b> No data	<b>Specific Gravity (water=1):</b> 0.95 @ 60°F (15.6°C)
<b>Particle Size:</b> Not applicable	<b>Bulk Density:</b> 7.96 lbs/gal
<b>Percent Volatile:</b> No data	<b>Viscosity:</b> No data
<b>Flammability (solid, gas):</b> Not applicable	<b>Solubility in Water:</b> Insoluble

**SECTION 10: Stability and reactivity**

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**Incompatible materials:** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use.

**SECTION 11: Toxicological information**

**Information on Toxicological Effects**

**Substance / Mixture**

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** Not expected to be an aspiration hazard

**Skin Corrosion/Irritation:** Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Causes mild eye irritation.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific Target Organ Toxicity (Repeated Exposure):** No information available on the mixture, however none of the

components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

#### Information on Toxicological Effects of Components

##### Distillates, petroleum, solvent-dewaxed heavy paraffinic

*Carcinogenicity:* This oil has been highly refined by a variety of processes to reduce aromatics and improve performance characteristics. It meets the IP-346 criteria of less than 3 percent PAH's and is not considered a carcinogen by the International Agency for Research on Cancer.

## SECTION 12: Ecological information

### **GHS Classification:** **No classified hazards**

**Toxicity:** All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

**Persistence and Degradability:** The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

**Bioaccumulative Potential:** Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

**Mobility in Soil:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

**Other adverse effects:** None anticipated.

## SECTION 13: Disposal considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

## SECTION 14: Transport information

### U.S. Department of Transportation (DOT)

**UN Number:** Not regulated

**UN proper shipping name:** None

**Transport hazard class(es):** None

**Packing Group:** None

**Environmental Hazards:** This product does not meet the DOT/UN/IMDG/IMO criteria of a marine pollutant

**Special precautions for user:** If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

## SECTION 15: Regulatory information

### **CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds)**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

### **CERCLA/SARA - Section 311/312 (Title III Hazard Categories)**

US EPA has published a final rule aligning hazardous chemical reporting under sections 311 and 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA) with OSHA HCS. See Section 2 for hazard classifications under EPCRA.

### **CERCLA/SARA - Section 313 and 40 CFR 372**

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

Chemical Name	Concentration <sup>1</sup>	de minimis
Zinc Compound(s)	1 - 5	1.0%

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### **EPA (CERCLA) Reportable Quantity (in pounds)**

This material does not contain any chemicals with CERCLA Reportable Quantities.

### **California Proposition 65**

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

### **International Inventories**

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.  
All components are either on the DSL, or are exempt from DSL listing requirements.

## SECTION 16: Other information

Issue Date:	Previous Issue Date:	SDS Number	Status:
20-Jun-2017	22-Jun-2016	LBPH778587	FINAL

### **Revised Sections or Basis for Revision:**

Format change; Personal Protective Equipment (Section 8)

### **Legend (pursuant to NOM-018-STPS-2015):**

The information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

### **Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; HPR = Hazardous Products Regulations; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

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# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200), Health Canada HPR (SOR/2015-17), and Mexico NOM-018-STPS-2015



## SECTION 1: Identification

**Product Identifier** **MP Gear Lube**  
**Other means of identification** Phillips 66 MP Gear Lube SAE 75W-90  
Phillips 66 MP Gear Lube SAE 80W-90  
Phillips 66 MP Gear Lube SAE 85W-140  
Phillips 66 MP Gear Lube SAE 90  
Phillips 66 MP Gear Lube SAE 140  
**Code** **LBPH720260**  
**Relevant identified uses** Automotive Gear Oil  
**Uses advised against** All others  
**24 Hour Emergency Phone Number** CHEMTREC 1-800-424-9300  
CHEMTREC México 01-800-681-9531

**Manufacturer/Supplier**  
Phillips 66 Lubricants  
P.O. Box 4428  
Houston, TX 77210

**SDS Information**  
URL: [www.Phillips66.com](http://www.Phillips66.com)  
Phone: 800-762-0942  
Email: [SDS@P66.com](mailto:SDS@P66.com)

**Customer Service**  
U.S.: 800-368-7128 or International: 1-832-765-2500  
**Technical Information**  
1-877-445-9198

## SECTION 2: Hazard identification

### Classified Hazards

No classified hazards

### Hazards Not Otherwise Classified (HNOC)

PHNOC: None known

HHNOC: None known

### Label Elements

No classified hazards

## SECTION 3: Composition/information on ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Residual oils, petroleum, solvent-dewaxed	64742-62-7	0 - 94
Distillates, petroleum, solvent-dewaxed heavy paraffinic	64742-65-0	0 - 94
Distillates, petroleum, hydrotreated heavy paraffinic	64742-54-7	0 - 49

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION 4: First aid measures

**Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical



attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

**Inhalation:** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion:** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Prolonged or repeated contact may dry skin and cause irritation

**Notes to Physician:** Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

## SECTION 5: Firefighting measures

### NFPA 704 Hazard Class

Health: 0 Flammability: 1 Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

**Special protective actions for fire-fighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

## SECTION 7: Handling and storage

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

## SECTION 8: Exposure controls/personal protection

Chemical Name	ACGIH	OSHA	Mexico	Phillips 66
Residual oils, petroleum, solvent-dewaxed	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	---	---	---
Distillates, petroleum, solvent-dewaxed heavy paraffinic	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	---	---	---
Distillates, petroleum, hydrotreated heavy paraffinic	TWA: 5mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated	---	---	---

**Note:** State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

**Skin/Hand Protection:** The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Suggested protective materials: Nitrile

**Respiratory Protection:** Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily**

available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

## SECTION 9: Physical and chemical properties

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

<b>Appearance:</b> Amber	<b>Flash Point:</b> Minimum 302 °F / 150 °C
<b>Physical Form:</b> Liquid	<b>Test Method:</b> Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010
<b>Odor:</b> Petroleum	<b>Initial Boiling Point/Range:</b> No data
<b>Odor Threshold:</b> No data	<b>Vapor Pressure:</b> <1 mm Hg
<b>pH:</b> Not applicable	<b>Partition Coefficient (n-octanol/water) (Kow):</b> No data
<b>Vapor Density (air=1):</b> >1	<b>Melting/Freezing Point:</b> No data
<b>Upper Explosive Limits (vol % in air):</b> No data	<b>Auto-ignition Temperature:</b> No data
<b>Lower Explosive Limits (vol % in air):</b> No data	<b>Decomposition Temperature:</b> No data
<b>Evaporation Rate (nBuAc=1):</b> <1	<b>Specific Gravity (water=1):</b> 0.87 - 0.91 @ 60°F (15.6°C)
<b>Particle Size:</b> Not applicable	<b>Bulk Density:</b> 7.24 - 7.58 lbs/gal
<b>Percent Volatile:</b> Negligible	<b>Viscosity:</b> 14.0 - 32.0 cSt @ 100°C; 97 - 441 cSt @ 40°C
<b>Flammability (solid, gas):</b> Not applicable	<b>Solubility in Water:</b> Negligible

## SECTION 10: Stability and reactivity

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**Incompatible materials:** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use.

## SECTION 11: Toxicological information

### Information on Toxicological Effects

#### Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** Not expected to be an aspiration hazard

**Skin Corrosion/Irritation:** Not expected to be irritating. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Not expected to be irritating.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific Target Organ Toxicity (Repeated Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

#### Information on Toxicological Effects of Components

##### Lubricant Base Oil (Petroleum)

*Carcinogenicity:* The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

### SECTION 12: Ecological information

#### **GHS Classification:** **No classified hazards**

**Toxicity:** All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

**Persistence and Degradability:** The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

**Bioaccumulative Potential:** Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

**Mobility in Soil:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

**Other adverse effects:** None anticipated.

### SECTION 13: Disposal considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

### SECTION 14: Transport information

#### U.S. Department of Transportation (DOT)

**UN Number:** Not regulated

**UN proper shipping name:** None

**Transport hazard class(es):** None

**Packing Group:** None

**Environmental Hazards:** This product does not meet the DOT/UN/IMDG/IMO criteria of a marine pollutant

**Special precautions for user:** If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

## SECTION 15: Regulatory information

### **CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds)**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

### **CERCLA/SARA - Section 311/312 (Title III Hazard Categories)**

US EPA has published a final rule aligning hazardous chemical reporting under sections 311 and 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA) with OSHA HCS. See Section 2 for hazard classifications under EPCRA.

### **CERCLA/SARA - Section 313 and 40 CFR 372**

This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

### **EPA (CERCLA) Reportable Quantity (in pounds)**

This material does not contain any chemicals with CERCLA Reportable Quantities.

### **California Proposition 65**

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

### **International Inventories**

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.

All components are either on the DSL, or are exempt from DSL listing requirements.

## SECTION 16: Other information

Issue Date:	Previous Issue Date:	SDS Number	Status:
23-Jun-2017	22-Jun-2016	LBPH720260	FINAL

### **Revised Sections or Basis for Revision:**

Format change; Regulatory information (Section 15)

### **Legend (pursuant to NOM-018-STPS-2015):**

The information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

### **Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; HPR = Hazardous Products Regulations; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

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# Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)



## SECTION 1: Identification

**Product Identifier** **MP Gear Lube**  
**Other means of identification** Phillips 66 MP Gear Lube SAE 75W-90  
Phillips 66 MP Gear Lube SAE 80W-90  
Phillips 66 MP Gear Lube SAE 85W-140  
Phillips 66 MP Gear Lube SAE 90  
Phillips 66 MP Gear Lube SAE 140  
**SDS Number** **LBPH720260**  
**Relevant identified uses** Automotive Gear Oil  
**Uses advised against** All others  
**24 Hour Emergency Phone Number** CHEMTREC 1-800-424-9300  
CHEMTREC Mexico 01-800-681-9531

<b>Manufacturer/Supplier</b> Phillips 66 Lubricants P.O. Box 4428 Houston, TX 77210	<b>SDS Information</b> Phone: 800-762-0942 Email: SDS@P66.com URL: www.Phillips66.com	<b>Customer Service</b> U.S.: 800-368-7128 or International: 1-832-765-2500 <b>Technical Information</b> 1-877-445-9198
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## SECTION 2: Hazard identification

**Classified Hazards** **Hazards Not Otherwise Classified (HNOC)**

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200. PHNOC: None known

HHNOC: None known

### Label Elements

No classified hazards

## SECTION 3: Composition/information on ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Residual oils, petroleum, solvent-dewaxed	64742-62-7	0 - 94
Distillates, petroleum, solvent-dewaxed heavy paraffinic	64742-65-0	0 - 94
Distillates, petroleum, hydrotreated heavy paraffinic	64742-54-7	0 - 49

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION 4: First aid measures

**Eye Contact:** If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

**Skin Contact:** Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

**Inhalation:** First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

**Ingestion:** First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

**Most important symptoms and effects, both acute and delayed:** Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Prolonged or repeated contact may dry skin and cause irritation.

**Notes to Physician:** Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

## SECTION 5: Firefighting measures

### NFPA 704 Hazard Class

Health: 0 Flammability: 1 Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

**Special protective actions for firefighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

**SECTION 7: Handling and storage**

**Precautions for safe handling:** Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

**SECTION 8: Exposure controls/personal protection**

Chemical Name	ACGIH	OSHA	Phillips 66
Residual oils, petroleum, solvent-dewaxed	---	---	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated
Distillates, petroleum, solvent-dewaxed heavy paraffinic	---	---	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated
Distillates, petroleum, hydrotreated heavy paraffinic	---	---	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> as Oil Mist, if Generated

**Note:** State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

**Skin/Hand Protection:** The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Suggested protective materials: Nitrile

**Respiratory Protection:** Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**



## SECTION 9: Physical and chemical properties

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

<b>Appearance:</b> Amber	<b>Flash Point:</b> Minimum 302 °F / 150 °C
<b>Physical Form:</b> Liquid	<b>Test Method:</b> Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010
<b>Odor:</b> Petroleum	<b>Initial Boiling Point/Range:</b> No data
<b>Odor Threshold:</b> No data	<b>Vapor Pressure:</b> <1 mm Hg
<b>pH:</b> Not applicable	<b>Partition Coefficient (n-octanol/water) (Kow):</b> No data
<b>Vapor Density (air=1):</b> >1	<b>Melting/Freezing Point:</b> No data
<b>Upper Explosive Limits (vol % in air):</b> No data	<b>Auto-ignition Temperature:</b> No data
<b>Lower Explosive Limits (vol % in air):</b> No data	<b>Decomposition Temperature:</b> No data
<b>Evaporation Rate (nBuAc=1):</b> <1	<b>Specific Gravity (water=1):</b> 0.87 - 0.91 @ 60°F (15.6°C)
<b>Particle Size:</b> Not applicable	<b>Bulk Density:</b> 7.24 - 7.58 lbs/gal
<b>Percent Volatile:</b> Negligible	<b>Viscosity:</b> 14.0 - 32.0 cSt @ 100°C; 97 - 441 cSt @ 40°C
<b>Flammability (solid, gas):</b> Not applicable	<b>Solubility in Water:</b> Negligible

## SECTION 10: Stability and reactivity

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

**Incompatible materials:** Avoid contact with strong oxidizing agents and strong reducing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use.

## SECTION 11: Toxicological information

### Information on Toxicological Effects

#### Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)
Oral	Unlikely to be harmful		> 5 g/kg (estimated)

**Aspiration Hazard:** Not expected to be an aspiration hazard.

**Skin Corrosion/Irritation:** Not expected to be irritating. Repeated exposure may cause skin dryness or cracking.

**Serious Eye Damage/Irritation:** Not expected to be irritating.

**Skin Sensitization:** No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

**Respiratory Sensitization:** No information available.

**Specific Target Organ Toxicity (Single Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Specific Target Organ Toxicity (Repeated Exposure):** No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

**Carcinogenicity:** No information available on the mixture, however none of the components have been classified for

carcinogenicity (or are below the concentration threshold for classification).

**Germ Cell Mutagenicity:** No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

**Reproductive Toxicity:** No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

#### Information on Toxicological Effects of Components

##### **Lubricant Base Oil (Petroleum)**

*Carcinogenicity:* The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

## SECTION 12: Ecological information

### **GHS Classification:** **No classified hazards**

**Toxicity:** All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

**Persistence and Degradability:** The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

**Bioaccumulative Potential:** Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

**Mobility in Soil:** Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

**Other adverse effects:** None anticipated.

## SECTION 13: Disposal considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

## SECTION 14: Transport information

### **U.S. Department of Transportation (DOT)**

**UN Number:** Not regulated

**UN proper shipping name:** None

**Transport hazard class(es):** None

**Packing Group:** None

**Environmental Hazards:** This product does not meet the DOT/UN/IMDG/IMO criteria of a marine pollutant

**Special precautions for user:** If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

## SECTION 15: Regulatory information

### CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

### CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Acute Health Hazard:	No
Chronic Health Hazard:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactive Hazard:	No

### CERCLA/SARA - Section 313 and 40 CFR 372:

This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

### EPA (CERCLA) Reportable Quantity (in pounds):

This material does not contain any chemicals with CERCLA Reportable Quantities.

### California Proposition 65:

Warning: This material may contain detectable quantities of the following chemicals, known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the warning requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Chemical Name	Type of Toxicity
Ethyl acrylate	Cancer

### International Hazard Classification

#### Canada:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

### International Inventories

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.

All components are either on the DSL, or are exempt from DSL listing requirements.

**U.S. Export Control Classification Number:** EAR99

## SECTION 16: Other information

Issue Date:	Previous Issue Date:	SDS Number	Status:
22-Jun-2016	04-May-2016	LBPH720260	FINAL

### **Revised Sections or Basis for Revision:**

New SDS


### **Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

### **Disclaimer of Expressed and implied Warranties:**

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS

EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

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29 CFR 1910.1200 (OSHA HazCom 2012)

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

**Product identifier**

Trade name : NAPA® 1290 PREM PERF SAE 10W-30 Motor Oil

<p><b>Details of the supplier of the safety data sheet</b>  Valvoline LLC  100 Valvoline Way  Lexington, KY 40509  United States of America (USA)  1-800-TEAMVAL (1-800-8326-825)</p>	<p><b>Emergency telephone number</b>  1-800-VALVOLINE (1-800-825-8654)</p> <p><b>Regulatory Information Number</b>  1-800-TEAMVAL (1-800-8326-825)</p> <p><b>Product Information</b>  1-800-TEAMVAL (1-800-8326-825)</p>
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**SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification**

This material is considered hazardous under the OSHA Hazard Communication Standard criteria, based on hazard(s) not otherwise classified.

**GHS label elements**

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

**Other hazards**

Static-accumulating flammable liquid.


**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Defatter

**Hazardous components**


Chemical name	CAS-No.	Classification	Concentration (%)
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	Asp. Tox. 1; H304	3.36
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	3.226
Lubricating oils (petroleum),	64742-58-1	This material is	1.2513

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hydrotreated		considered hazardous under the OSHA Hazard Communication Standard criteria, based on hazard(s) not otherwise classified.	
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#### SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : If breathed in, move person into fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : Remove contact lenses.  
Protect unharmed eye.
- If swallowed : Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.
- Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:  
acne  
stomach or intestinal upset (nausea, vomiting, diarrhea)  
irritation (nose, throat, airways)

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Notes to physician : No hazards which require special first aid measures.

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## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide  
Hydrocarbons  
nitrogen oxides (NO<sub>x</sub>)
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.  
Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

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**SECTION 7. HANDLING AND STORAGE**

- Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.
- Materials to avoid : No materials to be especially mentioned.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (Petroleum), Hydrotreated Heavy Paraffinic	64742-54-7	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	5 mg/m3 Inhalable fraction	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL
Lubricating oils (petroleum), hydrotreated	64742-58-1	TWA	5 mg/m3 Inhalable fraction	ACGIH

- Engineering measures** : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.



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**Personal protective equipment**

- Respiratory protection : No personal respiratory protective equipment normally required.
- Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.
- Skin and body protection : Wear as appropriate:  
Safety shoes  
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : General industrial hygiene practice.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Physical state : liquid
- Odour : No data available
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : No data available
- Flash point : > 390 °F / > 199 °C  
Method: Cleveland open cup
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Flammability (liquids) :  
Flammability (liquids) : Static-accumulating flammable liquid.
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : 0.0133333 hPa (21.11 °C)

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## Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.868 g/cm<sup>3</sup> (15.56 °C)

## Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition :  
No data available

## Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 70 mm<sup>2</sup>/s (40 °C)

Oxidizing properties : No data available

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products

carbon dioxide and carbon monoxide  
Hydrocarbons  
Nitrogen oxides (NO<sub>x</sub>)**SECTION 11. TOXICOLOGICAL INFORMATION**

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Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact  
Ingestion

**Acute toxicity**

Not classified based on available information.

**Components:**

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Acute oral toxicity : LD50 (Rat): &gt; 15 g/kg

Acute dermal toxicity : LD50 (Rabbit): &gt; 5 g/kg

Lubricating oils (petroleum), hydrotreated:

Acute oral toxicity : LD50 (Rat): &gt; 2,000 mg/kg

Assessment: Not classified as acutely toxic by ingestion under GHS.

Acute dermal toxicity : LD50 (Rat): &gt; 2,000 mg/kg

Assessment: Not classified as acutely toxic by dermal absorption under GHS.

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: Slight, transient irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Slight, transient irritation

Lubricating oils (petroleum), hydrotreated:

Result: No skin irritation

Result: Repeated exposure may cause skin dryness or cracking.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Product:**

Remarks: Unlikely to cause eye irritation or injury.

**Components:**


Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Result: No eye irritation

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Slight, transient irritation

Lubricating oils (petroleum), hydrotreated:

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Result: Slight, transient irritation

**Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.  
 Respiratory sensitisation: Not classified based on available information.  
 Germ cell mutagenicity  
 Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Product:**

No aspiration toxicity classification

**Components:**

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:  
 May be fatal if swallowed and enters airways.

**HYDROTREATED LIGHT PARAFFINIC DISTILLATE:**

May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks: No data available

**Carcinogenicity:**

**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Ecotoxicology Assessment



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Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

**Components:**

Distillates (Petroleum), Hydrotreated Heavy Paraffinic:

Toxicity to fish : LL50 (Fish): > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Aquatic invertebrates): 10 mg/l

Lubricating oils (petroleum), hydrotreated:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Brine shrimp (Artemia salina)): > 22,500 mg/l  
Exposure time: 48 h

Ecotoxicology Assessment  
Chronic aquatic toxicity : No toxicity at the limit of solubility

**Persistence and degradability**

**Components:**

No data available

**Bioaccumulative potential**

**Components:**

No data available

**Mobility in soil**

**Components:**

No data available

**Other adverse effects**

No data available

**Product:**

Additional ecological information : No data available

**Components:**

---

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.



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Contaminated packaging : Empty remaining contents.

**SECTION 14. TRANSPORT INFORMATION**

**International transport regulations**

**REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
-----------	----------------------	---------------	--------------------	---------------	------------------------------

**U.S. DOT - ROAD**

Not dangerous goods
---------------------

**CFR\_RAIL\_C**

Not dangerous goods
---------------------

**U.S. DOT - INLAND WATERWAYS**

Not dangerous goods
---------------------

**TDG\_ROAD\_C**

Not dangerous goods
---------------------

**TDG\_RAIL\_C**

Not dangerous goods
---------------------

**TDG\_INWT\_C**

Not dangerous goods
---------------------

**INTERNATIONAL MARITIME DANGEROUS GOODS**

Not dangerous goods
---------------------

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods
---------------------

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

Not dangerous goods
---------------------

**MX\_DG**

Not dangerous goods
---------------------



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**\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	no
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

**SECTION 15. REGULATORY INFORMATION**

**EPCRA - Emergency Planning and Community Right-to-Know Act  
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
TOLUENE	108-88-3	1000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : No SARA Hazards


**SARA 313** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Prop 65** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

**The components of this product are reported in the following inventories:**

- TSCA : On TSCA Inventory
- DSL : All components of this product are on the Canadian DSL
- AICS : On the inventory, or in compliance with the inventory
- ENCS : Contact your sales representative for additional information.
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : Low volume exemption
- IECSC : q (quantity restricted)

**Inventories**

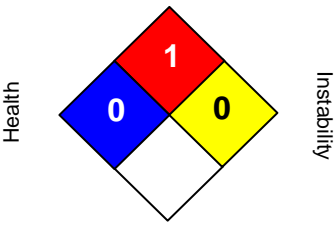
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AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

**SECTION 16. OTHER INFORMATION**

**Further information**

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<p><b>NFPA:</b></p> <div style="text-align: center;"> <p>Flammability</p>  <p>Health      Instability</p> <p>Special hazard.</p> </div>	<p><b>HMIS III:</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="background-color: blue; color: white;"><b>HEALTH</b></td> <td><b>0</b></td> </tr> <tr> <td style="background-color: red; color: white;"><b>FLAMMABILITY</b></td> <td><b>1</b></td> </tr> <tr> <td style="background-color: yellow;"><b>PHYSICAL HAZARD</b></td> <td><b>0</b></td> </tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>0</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>0</b>						
<b>FLAMMABILITY</b>	<b>1</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

**NFPA Flammable and Combustible Liquids Classification**  
Combustible Liquid Class IIIB

**Full text of H-Statements**


H304                                      May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet  
Valvoline internal data including own and sponsored test reports  
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline’s Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :  
ACGIH : American Conference of Industrial Hygienists




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BEI : Biological Exposure Index  
 CAS : Chemical Abstracts Service (Division of the American Chemical Society).  
 CMR : Carcinogenic, Mutagenic or Toxic for Reproduction  
 FG : Food grade  
 GHS : Globally Harmonized System of Classification and Labeling of Chemicals.  
 H-statement : Hazard Statement  
 IATA : International Air Transport Association.  
 IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization  
 ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"  
 IMDG : International Maritime Code for Dangerous Goods  
 ISO : International Organization for Standardization  
 logPow : octanol-water partition coefficient  
 LCxx : Lethal Concentration, for xx percent of test population  
 LDxx : Lethal Dose, for xx percent of test population.  
 ICxx : Inhibitory Concentration for xx of a substance  
 Ecxx : Effective Concentration of xx  
 N.O.S.: Not Otherwise Specified  
 OECD : Organization for Economic Co-operation and Development  
 OEL : Occupational Exposure Limit  
 P-Statement : Precautionary Statement  
 PBT : Persistent , Bioaccumulative and Toxic  
 PPE : Personal Protective Equipment  
 STEL : Short-term exposure limit  
 STOT : Specific Target Organ Toxicity  
 TLV : Threshold Limit Value  
 TWA : Time-weighted average  
 vPvB : Very Persistent and Very Bioaccumulative  
 WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act  
 DOT : Department of Transportation  
 FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act  
 HMIRC : Hazardous Materials Information Review Commission  
 HMIS : Hazardous Materials Identification System  
 NFPA : National Fire Protection Association  
 NIOSH : National Institute for Occupational Safety and Health  
 OSHA : Occupational Safety and Health Administration  
 PMRA : Health Canada Pest Management Regulatory Agency  
 RTK : Right to Know  
 WHMIS : Workplace Hazardous Materials Information System

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29 CFR 1910.1200 (OSHA HazCom 2012)

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

**Product identifier**

Trade name : NAPA® 8310 PREMIUM PERFORMANCE SAE 80W-90 GEAR OIL

**Relevant identified uses of the substance or mixture and uses advised against**


<p><b>Details of the supplier of the safety data sheet</b>  Valvoline LLC  3499 Blazer Parkway  Lexington, KY 40509  United States of America (USA)  1-800-TEAMVAL</p>	<p><b>Emergency telephone number</b>  1-800-VALVOLINE</p> <p><b>Regulatory Information Number</b>  1-800-TEAMVAL</p> <p><b>Product Information</b>  1-800-TEAMVAL</p>
--	---

**SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification**

Skin sensitization : Category 1

**GHS label elements**

Hazard pictograms : 

Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.


**Prevention:**

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
Contaminated work clothing must not be allowed out of the workplace.

Wear protective gloves.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/ attention.  
Wash contaminated clothing before reuse.

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**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Defatter

**Hazardous components**


Chemical name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	Asp. Tox. 1; H304	1.393
AMINES, C12-14-TERT-ALKYL	68955-53-3	Flam. Liq. 4; H227 Acute Tox. 4; H302 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317	0.343

**SECTION 4. FIRST AID MEASURES**

General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.

If inhaled : If breathed in, move person into fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.

In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.  
If on skin, rinse well with water.

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First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.  
Wash contaminated clothing before re-use.

- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
If eye irritation persists, consult a specialist.
- If swallowed : Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction.  
Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.  
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:  
stomach or intestinal upset (nausea, vomiting, diarrhea)  
irritation (nose, throat, airways)  
Headache  
Dizziness
- Notes to physician : No hazards which require special first aid measures.

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## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet

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- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide  
Hydrocarbons
- Specific extinguishing methods :  
  
Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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#### SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

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#### SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.  
Do not smoke.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
Container hazardous when empty.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.

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Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	TWA	5 mg/m3 Mist	OSHA Z-1
		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
		TWA	5 mg/m3 Mist	OSHA P0
		TWA	5 mg/m3 Mist	NIOSH REL
		ST	10 mg/m3 Mist	NIOSH REL
		PEL	5 mg/m3 particulate	CAL PEL

### Hazardous components without workplace control parameters

Components	CAS-No.
AMINES, C12-14-TERT-ALKYL	68955-53-3

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

### Personal protective equipment


Respiratory protection : Respiratory protection is not required under normal conditions of use.

### Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

### Eye protection

: Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

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Skin and body protection : Wear as appropriate:  
 Impervious clothing  
 Safety shoes  
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
 Discard gloves that show tears, pinholes, or signs of wear.  
 Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Colour : amber

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : > 424.9 °F / 218.3 °C  
(1013.333 hPa)

Flash point : > 222 °C  
Method: Cleveland open cup

Evaporation rate : > 1  
Ethyl Ether

Flammability (solid, gas) : No data available

Upper explosion limit : No data available


Lower explosion limit : No data available

Vapour pressure : < 0.1000000 mmHg

Relative vapour density : > 1AIR=1

Relative density : 0.89 (60.00 °F)

Density : 0.8916 g/cm<sup>3</sup> (15.56 °C)

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Solubility(ies)  
 Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity  
 Viscosity, dynamic : No data available

Viscosity, kinematic : 146 mm<sup>2</sup>/s (40 °C)

Oxidizing properties : No data available

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : None known.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : Aldehydes  
 Carbon monoxide

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**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Inhalation  
 Skin contact  
 Eye Contact  
 Ingestion


**Acute toxicity**

Not classified based on available information.

**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:  
 Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg



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Acute inhalation toxicity : LC50 (Rat, male and female): > 5.28 mg/l  
 Exposure time: 4 h  
 Test atmosphere: vapour  
 Method: OECD Test Guideline 403  
 Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
 Assessment: No adverse effect has been observed in acute dermal toxicity tests.

LD50 (Rabbit): > 3,160 mg/kg  
 Assessment: No adverse effect has been observed in acute dermal toxicity tests.

AMINES, C12-14-TERT-ALKYL:  
 Acute oral toxicity : LD50 (Rat): 612 mg/kg  
 Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, female): 1.19 mg/l  
 Exposure time: 4 h  
 Test atmosphere: vapour  
 Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): 251 mg/kg  
 Method: OECD Test Guideline 402

**Skin corrosion/irritation**  
 Not classified based on available information.

**Product:**  
 Remarks: May cause skin irritation in susceptible persons.

**Components:**  
 DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:  
 Result: Slight, transient irritation


AMINES, C12-14-TERT-ALKYL:  
 Species: Rabbit  
 Result: Corrosive after 3 minutes to 1 hour of exposure

**Serious eye damage/eye irritation**  
 Not classified based on available information.

**Product:**  
 Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Remarks: Unlikely to cause eye irritation or injury.

**Components:**  
 DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:  
 Result: Slight, transient irritation

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AMINES, C12-14-TERT-ALKYL:  
Species: Rabbit  
Result: Corrosive

**Respiratory or skin sensitisation**

Skin sensitisation: May cause an allergic skin reaction.  
Respiratory sensitisation: Not classified based on available information.

**Components:**

AMINES, C12-14-TERT-ALKYL:  
Test Type: Buehler Test  
Species: Guinea pig  
Assessment: The product is a skin sensitiser, sub-category 1A.

Germ cell mutagenicity  
Not classified based on available information.

**Components:**

AMINES, C12-14-TERT-ALKYL:  
Genotoxicity in vitro : Test Type: Ames test  
Test species: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
Test species: Mouse  
Cell type: Bone marrow  
Method: OECD Test Guideline 474  
Result: negative

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Product:**

No aspiration toxicity classification

**Components:**


DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:  
May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks: No data available

**Carcinogenicity:**

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- IARC** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- OSHA** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
- NTP** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 3; Harmful to aquatic life with long lasting effects.

#### Components:

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l

Exposure time: 96 h

Test Type: semi-static test

Test substance: WAF

Method: OECD Test Guideline 203

Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other : EL50 (Water flea (Daphnia magna)): 1.4 mg/l

aquatic invertebrates Exposure time: 48 h

Test Type: static test

Test substance: WAF

Method: OECD Test Guideline 202

Remarks: Information given is based on data obtained from similar substances.

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l

Exposure time: 72 h


Test Type: static test

Test substance: WAF

Method: OECD Test Guideline 201

Remarks: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other : NOEL (Water flea (Daphnia magna)): 0.48 mg/l

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aquatic invertebrates (Chronic toxicity) : Exposure time: 21 d  
 Test Type: semi-static test  
 Test substance: WAF  
 Method: OECD Test Guideline 211  
 Remarks: Information given is based on data obtained from similar substances.

AMINES, C12-14-TERT-ALKYL:  
 Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.3 mg/l  
 Exposure time: 96 h  
 Test Type: static test  
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Daphnia magna)): 2.5 mg/l  
 Exposure time: 48 h  
 Test Type: static test

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (microalgae)): 0.44 mg/l  
 End point: Growth inhibition  
 Exposure time: 72 h  
 Test Type: static test  
 Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (microalgae)): 0.05 mg/l  
 End point: Growth inhibition  
 Exposure time: 72 h  
 Test Type: static test  
 Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.078 mg/l  
 Exposure time: 96 d  
 Test Type: flow-through test  
 Method: OECD Test Guideline 210


M-Factor (Chronic aquatic toxicity) : 1

**Persistence and degradability**

**Components:**

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:  
 Biodegradability : Result: Inherently biodegradable.  
 Biodegradation: 58.6 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301F

AMINES, C12-14-TERT-ALKYL:  
 Biodegradability : Result: Not readily biodegradable.

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Biodegradation: 22 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301D

No data available

**Bioaccumulative potential**

**Components:**

AMINES, C12-14-TERT-ALKYL:

Partition coefficient: n-octanol/water : log Pow: 2.9

No data available

**Mobility in soil**

**Components:**

No data available

**Other adverse effects**

No data available

**Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

**Components:**

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

General advice : The product should not be allowed to enter drains, water courses or the soil.  
 Do not contaminate ponds, waterways or ditches with chemical or used container.  
 Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.  
 Dispose of as unused product.  
 Empty containers should be taken to an approved waste handling site for recycling or disposal.  
 Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION**

**International transport regulations**

**REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.



**SAFETY DATA SHEET**

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3031

**U.S. DOT - ROAD**

Not dangerous goods

**CFR\_RAIL\_C**

Not dangerous goods

**U.S. DOT - INLAND WATERWAYS**

Not dangerous goods

**TDG\_ROAD\_C**

Not dangerous goods

**TDG\_RAIL\_C**

Not dangerous goods

**TDG\_INWT\_C**

Not dangerous goods

**INTERNATIONAL MARITIME DANGEROUS GOODS**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

Not dangerous goods


**MX\_DG**

Not dangerous goods

**\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant	no
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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

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**SECTION 15. REGULATORY INFORMATION**

**EPCRA - Emergency Planning and Community Right-to-Know Act  
CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Acute Health Hazard

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Prop 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**The components of this product are reported in the following inventories:**

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

**SECTION 16. OTHER INFORMATION**

**Further information**

Revision Date: 03/24/2017

<b>NFPA:</b>	<b>HMIS III:</b>
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**SAFETY DATA SHEET**

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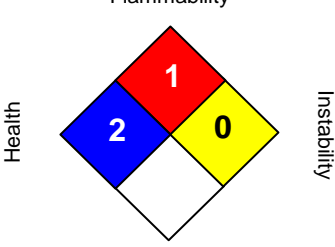
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 <p>Health: 2, Flammability: 1, Instability: 0, Special hazard.</p>	<table border="1"> <tr> <td style="background-color: blue; color: white;"><b>HEALTH</b></td> <td style="text-align: center;"><b>2</b></td> </tr> <tr> <td style="background-color: red; color: white;"><b>FLAMMABILITY</b></td> <td style="text-align: center;"><b>1</b></td> </tr> <tr> <td style="background-color: yellow; color: black;"><b>PHYSICAL HAZARD</b></td> <td style="text-align: center;"><b>0</b></td> </tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>2</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>2</b>						
<b>FLAMMABILITY</b>	<b>1</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

**NFPA Flammable and Combustible Liquids Classification**

Combustible Liquid Class IIIB

**Full text of H-Statements**

- H227 Combustible liquid.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H330 Fatal if inhaled.

Sources of key data used to compile the Safety Data Sheet

Valvoline internal data including own and sponsored test reports


The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

- ACGIH : American Conference of Industrial Hygienists
- BEI : Biological Exposure Index
- CAS : Chemical Abstracts Service (Division of the American Chemical Society).
- CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
- FG : Food grade



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GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

## 1. Identification

<b>Product identifier</b>	<b>Oatey All Purpose Clear Cement</b>
<b>Other means of identification</b>	
<b>Product code</b>	1403E
<b>Synonyms</b>	Part Numbers: 30818(TV), 30821(TV), 30834 (TV), 30847, 30847L, 30848, 31650, 31651, 32208, 32209
<b>Recommended use</b>	Joining PVC, CPVC, or ABS Pipe
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company Name</b>	Oatey Co.
<b>Address</b>	4700 West 160th St. Cleveland, OH 44135
<b>Telephone</b>	216-267-7100
<b>E-mail</b>	info@oatey.com
<b>Transport Emergency</b>	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
<b>Emergency First Aid</b>	1-877-740-5015
<b>Contact person</b>	MSDS Coordinator

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 2
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

<b>Response</b>	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.
<b>Supplemental information</b>	Not applicable.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%
Furan, Tetrahydro-	109-99-9	30-45
Acetone	67-64-1	10-20
Cyclohexanone	108-94-1	10-20
Methyl ethyl ketone	78-93-3	8-18
Polyvinyl chloride	9002-86-2	10.98
Ethene, chloro-homopolymer, chlorinated	68648-82-8	3-7
Silica, amorphous, fumed	112945-52-5	1-5

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.  Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.  Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

<b>Precautions for safe handling</b>	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm
	TWA	1 ppm

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	50 ppm 590 mg/m3	

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
Methyl ethyl ketone (CAS 78-93-3)	PEL	200 ppm	
		590 mg/m3	
Polyvinyl chloride (CAS 9002-86-2)	PEL	200 ppm	Respirable fraction.
		5 mg/m3	
		15 mg/m3	Total dust.

**US. OSHA Table Z-3 (29 CFR 1910.1000)**

Components	Type	Value
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3
		20 mppcf

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.
	TWA	1 mg/m3	

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3
		25 ppm
		735 mg/m3
Furan, Tetrahydro- (CAS 109-99-9)	STEL	250 ppm
		590 mg/m3
		200 ppm
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3
	TWA	300 ppm
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	590 mg/m3
		200 ppm
		6 mg/m3

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

## ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofuran	Urine	*
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*

\* - For sampling details, please see the source document.

### Exposure guidelines

#### US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1)

Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

Cyclohexanone (CAS 108-94-1)

Skin designation applies.

#### US - Tennessee OELs: Skin designation

Cyclohexanone (CAS 108-94-1)

Can be absorbed through the skin.

#### US ACGIH Threshold Limit Values: Skin designation

Cyclohexanone (CAS 108-94-1)

Can be absorbed through the skin.

Furan, Tetrahydro- (CAS 109-99-9)

Can be absorbed through the skin.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Cyclohexanone (CAS 108-94-1)

Can be absorbed through the skin.

### Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Face shield is recommended. Wear safety glasses with side shields (or goggles).

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves.

##### Other

Wear appropriate chemical resistant clothing.

#### Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

#### Physical state

Liquid.

#### Form

Liquid.

#### Color

Clear. Milky.

#### Odor

Solvent.

#### Odor threshold

Not available.

#### pH

Not available.

#### Melting point/freezing point

Not available.

#### Initial boiling point and boiling range

151 °F (66.11 °C)

#### Flash point

14.0 - 23.0 °F (-10.0 - -5.0 °C)

#### Evaporation rate

5.5 - 8

<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	1.8
<b>Flammability limit - upper (%)</b>	11.8
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	145 mm Hg @ 20 C
<b>Vapor density</b>	2.5
<b>Relative density</b>	0.94 +/- 0.02
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Negligible
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Bulk density</b>	7.8 lb/gal
<b>VOC (Weight %)</b>	380 g/l SCAQMD 1168/M316A

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

**Symptoms related to the physical, chemical and toxicological characteristics** Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

### Information on toxicological effects

**Acute toxicity** May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Acetone (CAS 67-64-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	20 ml/kg

Components	Species	Test Results
<i>Inhalation</i>		
LC50	Rat	50 mg/l, 8 Hours
<i>Oral</i>		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	948 mg/kg
<i>Inhalation</i>		
LC50	Rat	8000 ppm, 4 hours
<i>Oral</i>		
LD50	Rat	1540 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not available.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Cyclohexanone (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS 9002-86-2)	3 Not classifiable as to carcinogenicity to humans.
Silica, amorphous, fumed (CAS 112945-52-5)	3 Not classifiable as to carcinogenicity to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Polyvinyl chloride (CAS 9002-86-2)	Cancer
------------------------------------	--------

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** May be fatal if swallowed and enters airways.

**Chronic effects** Prolonged inhalation may be harmful.

**12. Ecological information**

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) > 100 mg/l, 96 hours



Components	Species	Test Results
Cyclohexanone (CAS 108-94-1)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) 481 - 578 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Partition coefficient n-octanol / water (log Kow)**

Acetone (CAS 67-64-1)	-0.24
Cyclohexanone (CAS 108-94-1)	0.81
Furan, Tetrahydro- (CAS 109-99-9)	0.46
Methyl ethyl ketone (CAS 78-93-3)	0.29

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

<b>UN number</b>	UN1133
<b>UN proper shipping name</b>	Adhesives
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	II
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	149, B52, IB2, T4, TP1, TP8
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	173
<b>Packaging bulk</b>	242

#### IATA

<b>UN number</b>	UN1133
<b>UN proper shipping name</b>	Adhesives
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	3L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

<b>UN number</b>	UN1133
<b>UN proper shipping name</b>	ADHESIVES

<b>Transport hazard class(es)</b>	
Class	3
Subsidiary risk	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	
Marine pollutant	No.
<b>EmS</b>	F-E, S-D
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not available.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer
	Central nervous system
	Liver
	Blood
	Flammability

### CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - No
	Fire Hazard - Yes
	Pressure Hazard - No
	Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

#### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

#### Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV
Methyl ethyl ketone (CAS 78-93-3)	35 %WV

#### DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532
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**US state regulations****US. Massachusetts RTK - Substance List**

Acetone (CAS 67-64-1)  
 Cyclohexanone (CAS 108-94-1)  
 Furan, Tetrahydro- (CAS 109-99-9)  
 Methyl ethyl ketone (CAS 78-93-3)  
 Silica, amorphous, fumed (CAS 112945-52-5)

**US. New Jersey Worker and Community Right-to-Know Act**

Acetone (CAS 67-64-1)  
 Cyclohexanone (CAS 108-94-1)  
 Furan, Tetrahydro- (CAS 109-99-9)  
 Methyl ethyl ketone (CAS 78-93-3)  
 Polyvinyl chloride (CAS 9002-86-2)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Acetone (CAS 67-64-1)  
 Cyclohexanone (CAS 108-94-1)  
 Furan, Tetrahydro- (CAS 109-99-9)  
 Methyl ethyl ketone (CAS 78-93-3)  
 Silica, amorphous, fumed (CAS 112945-52-5)

**US. Rhode Island RTK**

Acetone (CAS 67-64-1)  
 Cyclohexanone (CAS 108-94-1)  
 Furan, Tetrahydro- (CAS 109-99-9)  
 Methyl ethyl ketone (CAS 78-93-3)

**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

<b>Issue date</b>	05-27-2015
<b>Revision date</b>	-
<b>Version #</b>	01
<b>HMIS® ratings</b>	Health: 2 Flammability: 3 Physical hazard: 0

**NFPA ratings****Disclaimer**

The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

Product: Compressed gases, n.o.s. (argon, carbon dioxide, oxygen); Compressed gases, n.o.s. (argon, carbon dioxide, helium) P-6290-B Date: December 2009

## Praxair Material Safety Data Sheet

### 1. Chemical Product and Company Identification

<b>Product Name:</b> Compressed gases, n.o.s. (argon, carbon dioxide, oxygen); Compressed gases, n.o.s. (argon, carbon dioxide, helium) (MSDS No. P-6290-B)	<b>Trade Name:</b> Robostar <sup>®</sup> CS, Robostar <sup>®</sup> SS
<b>Chemical Name:</b> Mixtures of argon, carbon dioxide, and helium or oxygen	<b>Synonyms:</b> Not applicable.
<b>Chemical Family:</b> Not applicable.	<b>Product Grades:</b> Not applicable.
<b>Telephone:</b> <b>Emergencies:</b> 1-800-645-4633* <b>CHEMTREC:</b> 1-800-424-9300* <b>Routine:</b> 1-800-PRAXAIR	<b>Company Name:</b> Praxair, Inc. 39 Old Ridgebury Road Danbury, CT 06810-5113

*\*Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier, Praxair sales representative, or call 1-800-PRAXAIR (1-800-772-9247).*

### 2. Hazards Identification

#### EMERGENCY OVERVIEW

**CAUTION! High-pressure gas.**

**Can cause rapid suffocation.**

**Can increase respiration and heart rate.**

**May cause dizziness and drowsiness.**

**Self-contained breathing apparatus may be required by rescue workers.**

**At normal temperature and pressure, this mixture is a colorless gas of unknown odor and taste, both of which may be sensed by some as slightly pungent.**

**OSHA REGULATORY STATUS:** The components of this mixture are considered hazardous by the OSHA Hazard Communications Standard (29 CFR 1910.1200).

#### POTENTIAL HEALTH EFFECTS:

##### Effects of a Single (Acute) Overexposure

**Inhalation.** These mixtures are asphyxiants. Effects are due to lack of oxygen. Mixtures containing carbon dioxide are also physiologically active, affecting circulation and breathing. Moderate concentrations may cause headache, drowsiness, dizziness, stinging of the nose and throat, excitation, rapid breathing, excess salivation, vomiting, and unconsciousness. Lack of oxygen can kill.

**Skin Contact.** No harm expected.

**Swallowing.** An unlikely route of exposure. This product is a gas at normal temperature and pressure.

**Eye Contact.** May cause a stinging sensation.

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**Effects of Repeated (Chronic) Overexposure.** No harm expected.

**Other Effects of Overexposure.** Damage to retinal or ganglion cells and central nervous system may occur (mixtures containing CO<sub>2</sub>).

**Medical Conditions Aggravated by Overexposure.** The toxicology and the physical and chemical properties of the mixture components suggest that overexposure is unlikely to aggravate existing medical conditions.

**CARCINOGENICITY:** None of the components of these mixtures is listed by NTP, OSHA, or IARC.

**POTENTIAL ENVIRONMENTAL EFFECTS:** None known. For further information, see section 12, Ecological Information.

### 3. Composition/Information on Ingredients

See sections 8, 10, 11, and 16 for information on by-products generated during use in welding and cutting. See section 16 for important information about mixtures.

COMPONENT	CAS NUMBER	CONCENTRATION
Helium	7440-59-7	0-<40%*
Carbon Dioxide	124-38-9	<10%*
Oxygen	7782-44-7	0-<5%*
Argon	7440-37-1	>60%*

\*The symbol > means "greater than"; the symbol <, "less than."

	Composition of RoboStar Mixtures	
	RoboStar CS	RoboStar SS
Argon	>85%	>60%
Carbon Dioxide	<10%	<1%
Helium	---	<40%
Oxygen	<5%	---

### 4. First Aid Measures

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may give oxygen. Call a physician.

**SKIN CONTACT:** Wash with soap and water. If irritation persists, seek medical attention.

**SWALLOWING:** An unlikely route of exposure. This product is a gas at normal temperature and pressure.

**EYE CONTACT:** Flush with water. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Get medical attention if discomfort persists.

**NOTES TO PHYSICIAN:** *There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.*

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## 5. Fire Fighting Measures

**FLAMMABLE PROPERTIES:** These mixtures cannot catch fire.

**SUITABLE EXTINGUISHING MEDIA:** Use media appropriate for surrounding fire. Water (i.e., safety shower) is the preferred extinguishing media for clothing fires.

**PRODUCTS OF COMBUSTION:** Not applicable.

**PROTECTION OF FIREFIGHTERS: CAUTION! High-pressure gas.** Evacuate all personnel from danger area. Immediately deluge cylinders with water from maximum distance until cool; then move them away from fire area if without risk. Shut off leak if without risk. Self-contained breathing apparatus may be required by rescue workers. On-site fire brigades must comply with OSHA 29 CFR 1910.156.

**Specific Physical and Chemical Hazards.** Heat of fire can build pressure in cylinder and cause it to rupture. No part of cylinder should be subjected to a temperature higher than 125°F (52°C). Cylinders containing this mixture are equipped with a pressure relief device. (Exceptions may exist where authorized by DOT.)

**Protective Equipment and Precautions for Firefighters.** Firefighters should wear self-contained breathing apparatus and full fire-fighting turnout gear.

## 6. Accidental Release Measures

**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

**CAUTION! High-pressure gas.**

**Personal Precautions.** These mixtures are asphyxiants. Lack of oxygen can kill. Evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Shut off leak if you can do so without risk. Ventilate area or move cylinder to a well-ventilated area. Test for sufficient oxygen, especially in confined spaces, before allowing reentry.

**Environmental Precautions.** Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, state, and local regulations. If necessary, call your local supplier for assistance.

## 7. Handling and Storage

**PRECAUTIONS TO BE TAKEN IN HANDLING:** Can cause rapid suffocation due to oxygen deficiency. Close cylinder valve after each use; keep closed even when empty. Protect cylinders from damage. Slowly open valve. If valve is hard to open, discontinue use and contact your supplier. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Keep away from heat, sparks, and open flame. Use only spark-proof tools and explosion-proof equipment. Arcs and sparks can ignite combustible materials. Prevent fires. For more information on fire prevention in welding and cutting, see NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hotwork*, published by the National Fire Protection Association. Do not strike an arc on the cylinder. The defect produced by an arc burn could lead to cylinder rupture.

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**PRECAUTIONS TO BE TAKEN IN STORAGE:** Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 125°F (52°C). Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods. For other precautions in using these mixtures, see section 16.

**RECOMMENDED PUBLICATIONS:** For further information on storage, handling, and use, see Praxair publication P-14-153, *Guidelines for Handling Gas Cylinders and Containers*. Obtain from your local supplier.

**8. Exposure Controls/Personal Protection**

**See section 16 for important information on by-products generated during use in welding and cutting.**

COMPONENT	OSHA PEL	ACGIH TLV-TWA (2009)
Argon	Not established.	Simple asphyxiant
Carbon Dioxide	5000 ppm	5000 ppm; 30,000 ppm, 15 min STEL
Helium	Not established.	Simple asphyxiant
Oxygen	Not established.	Not established.

TLV-TWAs should be used as a guide in the control of health hazards and not as fine lines between safe and dangerous concentrations.

IDLH = 40,000 ppm (carbon dioxide)

**ENGINEERING CONTROLS:**

**Local Exhaust.** Use a local exhaust system, if necessary, to prevent oxygen deficiency and to keep hazardous fumes and gases in the worker's breathing zone below all applicable exposure limits.

**Mechanical (General).** General exhaust ventilation may be acceptable if it can maintain an adequate supply of air and keep hazardous fumes and gases in the worker's breathing zone below all applicable exposure limits.

**Special.** None

**Other.** None

**PERSONAL PROTECTIVE EQUIPMENT:**

**Skin Protection.** Wear work gloves for cylinder handling; welding gloves for welding and cutting.

**Eye/Face Protection.** Wear safety glasses when handling cylinders. For welding, see section 16.

**Respiratory Protection.** A respiratory protection program that meet OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable) requirements must be followed whenever workplace conditions warrant respirator use. Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure (e.g., an organic vapor cartridge). For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus. Adequate

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ventilation must keep worker exposure below applicable exposure limits for fumes, gases, and other by products of welding.

## 9. Physical and Chemical Properties

<b>APPEARANCE:</b>	Colorless gas
<b>ODOR:</b>	Unknown. The carbon dioxide component is felt by some to have a slightly pungent odor and taste.
<b>ODOR THRESHOLD:</b>	Not available.
<b>PHYSICAL STATE:</b>	Gas at normal temperature and pressure
<b>pH:</b>	Not applicable.
<b>MELTING POINT at 1 atm:</b>	Not available.
<b>BOILING POINT at 1 atm:</b>	Not available.
<b>FLASH POINT (test method):</b>	Not applicable.
<b>EVAPORATION RATE (Butyl Acetate = 1):</b>	Gas
<b>FLAMMABILITY:</b>	Nonflammable
<b>FLAMMABLE LIMITS IN AIR, % by volume:</b>	<b>LOWER:</b> Not applicable. <b>UPPER:</b> Not applicable.
<b>VAPOR PRESSURE:</b>	Not applicable.
<b>VAPOR DENSITY:</b>	Not applicable.
<b>SPECIFIC GRAVITY (H<sub>2</sub>O = 1):</b>	Gas, not applicable.
<b>SPECIFIC GRAVITY (Air = 1) at 70°F (21.1°C) and 1 atm:</b>	0.88-1.38 (approximate range, calculated)
<b>SOLUBILITY IN WATER 32°F (0°C):</b>	Negligible
<b>PARTITION COEFFICIENT: n-octanol/water:</b>	Not available.
<b>AUTOIGNITION TEMPERATURE:</b>	Not applicable.
<b>DECOMPOSITION TEMPERATURE:</b>	Not available.
<b>PERCENT VOLATILES BY VOLUME:</b>	Gas
<b>MOLECULAR WEIGHT:</b>	Not applicable.
<b>MOLECULAR FORMULA:</b>	Mixtures of Ar, CO <sub>2</sub> , & He or O <sub>2</sub>

## 10. Stability and Reactivity

**CHEMICAL STABILITY:**  Unstable     Stable

**CONDITIONS TO AVOID:** None known.

**INCOMPATIBLE MATERIALS:** Alkali metals, alkaline earth metals, metal acetylides, chromium, titanium above 1022°F (550°C), uranium above 1382°F (750°C), magnesium above 1427°F (775°C).

**HAZARDOUS DECOMPOSITION PRODUCTS:** The arc may form gaseous reaction products such as carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc. See section 16. Other decomposition products of normal operation originate from the volatilization, reaction, or oxidation of the material being worked.

**POSSIBILITY OF HAZARDOUS REACTIONS:**  May Occur     Will Not Occur



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**11. Toxicological Information**

**ACUTE DOSE EFFECTS:** Not available. The welding process may generate hazardous fumes and gases. (See sections 3, 10, 15, and 16.)

**ACUTE INHALATION EFFECTS:** Argon, carbon dioxide, and helium are asphyxiants. Carbon dioxide is physiologically active. It initially stimulates respiration and then causes respiratory depression. High concentrations result in narcosis. Symptoms in humans are as follows:

<u>EFFECT:</u>	<u>CONCENTRATION:</u>
Breathing rate increases slightly.	1%
Breathing rate increases to 50% above normal level. Prolonged exposure can cause headache, tiredness.	2%
Breathing increases to twice normal rate and becomes labored. Weak narcotic effect. Impaired hearing, headache, increased blood pressure and pulse rate.	3%
Breathing increases to approximately four times normal rate, symptoms of intoxication become evident, and slight choking may be felt.	4 - 5%
Characteristic sharp odor noticeable. Very labored breathing, headache, visual impairment, and ringing in the ears. Judgment may be impaired, followed within minutes by loss of consciousness.	5 - 10%
Unconsciousness occurs more rapidly above 10% level. Prolonged exposure to high concentrations may eventually result in death from asphyxiation.	10 - 100%

**12. Ecological Information**

**ECOTOXICITY:** No known effects.

**OTHER ADVERSE EFFECTS: None known.** These mixtures do not contain any Class I or Class II ozone-depleting chemicals.

**13. Disposal Considerations**

**WASTE DISPOSAL METHOD:** Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

**14. Transport Information**

**DOT/IMO SHIPPING NAME:** Compressed gases, n.o.s. (argon, carbon dioxide, helium or oxygen)

<b>HAZARD CLASS:</b> 2.2	<b>PACKING GROUP/Zone:</b> Not applicable.	<b>IDENTIFICATION NUMBER:</b> UN1956	<b>PRODUCT RQ:</b> None
<b>SHIPPING LABEL(s):</b> NONFLAMMABLE GAS			
<b>PLACARD (when required):</b> NONFLAMMABLE GAS			

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**SPECIAL SHIPPING INFORMATION:** Cylinders should be transported in a secure position, in a well-ventilated vehicle. Cylinders transported in an enclosed, nonventilated compartment of a vehicle can present serious safety hazards.

Shipment of compressed gas cylinders that have been filled without the owner's consent is a violation of federal law [49 CFR 173.301(b)].

**MARINE POLLUTANTS:** None of the components of this mixture is listed as a marine pollutant by DOT.

## 15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, state, and local regulations.

### U.S. FEDERAL REGULATIONS:

EPA (ENVIRONMENTAL PROTECTION AGENCY)

CERCLA: COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (40 CFR Parts 117 and 302):

**Reportable Quantity (RQ):** None

SARA: SUPERFUND AMENDMENT AND REAUTHORIZATION ACT:

**SECTIONS 302/304:** Require emergency planning based on Threshold Planning Quantity (TPQ) and release reporting based on Reportable Quantities (RQ) of Extremely Hazardous Substances (EHS) (40 CFR Part 355):

**TPQ:** None

**EHS RQ (40 CFR 355):** None

**SECTIONS 311/312:** Require submission of MSDSs and reporting of chemical inventories with identification of EPA hazard categories. The hazard categories for this product are as follows:

**IMMEDIATE:** Yes

**DELAYED:** No

**PRESSURE:** Yes

**REACTIVITY:** No

**FIRE:** No

**SECTION 313:** Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR Part 372.

None of the components of these mixtures is subject to reporting under Section 313.

**40 CFR 68: RISK MANAGEMENT PROGRAM FOR CHEMICAL ACCIDENTAL RELEASE PREVENTION:** Requires development and implementation of risk management programs at facilities that manufacture, use, store, or otherwise handle regulated substances in quantities that exceed specified thresholds.

None of the components of these mixtures is listed as a regulated substance.

**TSCA: TOXIC SUBSTANCES CONTROL ACT:** The components of these mixtures are listed on the TSCA inventory.

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**OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:**

29 CFR 1910.119: PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: Requires facilities to develop a process safety management program based on Threshold Quantities (TQ) of highly hazardous chemicals.

None of the components of these mixtures is listed in Appendix A as a highly hazardous chemical.

**STATE REGULATIONS:**

**CALIFORNIA:** None of the components of these mixtures is listed by California under the SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 (Proposition 65).

**PENNSYLVANIA:** The components of these mixtures are subject to the PENNSYLVANIA WORKER AND COMMUNITY RIGHT-TO-KNOW ACT (35 P.S. Sections 7301-7320).

## 16. Other Information

Read and understand all labels and instructions supplied with all containers of this product.

**ADDITIONAL SAFETY AND HEALTH HAZARDS:** Using this product in welding and cutting may create additional hazards:

Read and understand the manufacturer's instructions and the precautionary labels on the products used in welding and cutting. For other safe practices information and a more-detailed description of the health hazards of welding and their consequences, ask your welding products supplier for a copy of Praxair's free safety booklet, P-52-529, *Precautions and Safe Practices for Electric Welding and Cutting*, and for other manufacturers' safety publications. For a detailed treatment, get ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*, published by the American Welding Society (AWS), 550 N.W. Le Jeune Rd., Miami, FL 33126, <http://www.aws.org/>, or see OSHA's Web site at <http://www.osha-slc.gov/SLTC/weldingcuttingbrazing/>. Order AWS documents from Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112-5710, <http://global.ihs.com/>.

**FUMES AND GASES** can be dangerous to your health and may cause serious lung disease.

- **Keep your head out of fumes. Do not breathe fumes and gases. Use enough ventilation, local exhaust, or both to keep fumes and gases from your breathing zone and the general area. Short-term overexposure to fumes may cause dizziness, nausea, and dryness or irritation of the nose, throat, and eyes or may cause other similar discomfort.**

Fumes and gases cannot be classified simply. The amount and type depend on the metal being worked and the process, procedure, equipment, and supplies used. Possible dangerous materials may be found in fluxes, electrodes, and other materials. Get an MSDS for every material you use.

Contaminants in the air may add to the hazard of fumes and gases. One such contaminant, chlorinated hydrocarbon vapors from cleaning and degreasing activities, poses a special risk.

- **Do not use electric arcs in the presence of chlorinated hydrocarbon vapors—highly toxic phosgene may be produced.**

Product: Compressed gases, n.o.s. (argon, carbon dioxide, oxygen); Compressed gases, n.o.s. (argon, carbon dioxide, helium) P-6290-B Date: December 2009

Metal coatings such as paint, plating, or galvanizing may generate harmful fumes when heated. Residues from cleaning materials may also be harmful.

- **Avoid arc operations on parts with phosphate residues (anti-rust, cleaning preparations)—highly toxic phosphine may be produced.**

To find the quantity and content of fumes and gases, you can take air samples. By analyzing these samples, you can find out what respiratory protection you need. One recommended sampling method is to take air from inside the worker's helmet or from the worker's breathing zone. See AWS F1.1, *Methods for Sampling and Analyzing Gases for Welding and Allied Processes*, available from the American Welding Society, 550 N.W. Le Jeune Rd., Miami, FL 33126.

#### **NOTES TO PHYSICIAN:**

**Acute:** *Gases, fumes, and dusts may cause irritation to the eyes, lungs, nose, and throat. Some toxic gases associated with welding and related processes may cause pulmonary edema, asphyxiation, and death. Acute overexposure may include signs and symptoms such as watery eyes, nose and throat irritation, headache, dizziness, difficulty breathing, frequent coughing, or chest pains.*

**Chronic:** *Protracted inhalation of air contaminants may lead to their accumulation in the lungs, a condition that may be seen as dense areas on chest x-rays. The severity of change is proportional to the length of exposure. The changes seen are not necessarily associated with symptoms or signs of reduced lung function or disease. In addition, the changes on x-rays may be caused by non-work-related factors such as smoking, etc.*

#### **PROTECTIVE CLOTHING AND EQUIPMENT FOR WELDING OPERATIONS:**

**PROTECTIVE GLOVES:** Wear welding gloves.

**EYE PROTECTION:** Wear a helmet or use a face shield with a filter lens. Select lens per ANSI Z49.1. Provide protective screens and flash goggles if needed to protect others; select per OSHA 29 CFR 1910.133.

**OTHER PROTECTIVE EQUIPMENT:** Wear hand, head, and body protection. (See ANSI Z49.1.) Worn as needed, these help prevent injury from radiation, sparks, and electrical shock. Minimum protection includes welder's gloves and a face shield. For added protection, consider arm protectors, aprons, hats, shoulder protection, and dark, substantial clothing.

**OTHER HAZARDOUS CONDITIONS OF HANDLING, STORAGE, AND USE: *High-pressure gas.*** Use piping and equipment adequately designed to withstand pressures to be encountered. Use a backflow prevention device in any piping. In choosing tools and equipment, avoid materials incompatible with acetylene. Copper, silver, and mercury and their salts, compounds, and high-concentration alloys can form explosive compounds with acetylene. Brass containing less than 65 percent copper and certain nickel alloys are generally acceptable for use in acetylene service but may not be adequate if high corrosion or excess moisture is present. Can cause rapid suffocation due to oxygen deficiency. Store and use with adequate ventilation. Close cylinder valve after each use; keep closed even when empty. Never work on a pressurized system. If there is a leak, close the cylinder valve. Blow the system down in a safe and environmentally sound manner in compliance with all federal, state, and local laws; then repair the leak. Never place a compressed gas cylinder where it may become part of an electrical circuit. When using compressed gases in and around electric welding applications, never ground the cylinders. Grounding exposes the cylinders to damage by the electric welding arc.

Product: Compressed gases, n.o.s. (argon, carbon dioxide, oxygen); Compressed gases, n.o.s. (argon, carbon dioxide, helium) P-6290-B Date: December 2009

**Mixtures.** When you mix two or more gases or liquefied gases, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Remember, gases and liquids have properties that can cause serious injury or death.

#### HAZARD RATING SYSTEMS:

##### NFPA RATINGS:

HEALTH = 1  
FLAMMABILITY = 0  
INSTABILITY = 0  
SPECIAL = None

##### HMIS RATINGS:

HEALTH = 1  
FLAMMABILITY = 0  
PHYSICAL HAZARD = 3

#### STANDARD VALVE CONNECTIONS FOR U.S. AND CANADA:

**TREADED:** CGA-580  
**PIN-INDEXED YOKE:** Not applicable.  
**ULTRA-HIGH-INTEGRITY CONNECTION:** Not applicable.

Use the proper CGA connections. **DO NOT USE ADAPTERS.** Additional limited-standard connections may apply. See CGA pamphlet V-1 listed below. Ask your supplier about free Praxair safety literature as referred to in this MSDS and on the label for this product. Further information can be found in the following materials published by the Compressed Gas Association, Inc. (CGA), 4221 Walney Road, 5<sup>th</sup> Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700, <http://www.cganet.com/Publication.asp>.

AV-1 *Safe Handling and Storage of Compressed Gases*  
G-6 *Carbon Dioxide*  
P-1 *Safe Handling of Compressed Gases in Containers*  
P-9 *Inert Gases—Argon, Nitrogen, and Helium*  
SB-2 *Oxygen-Deficient Atmospheres*  
V-1 *Compressed Gas Cylinder Valve Inlet and Outlet Connections*  
V-7 *Standard Method of Determining Cylinder Valve Outlet Connections for Industrial Gas Mixtures*  
— *Handbook of Compressed Gases, Fourth Edition*

Product: Compressed gases, n.o.s. (argon, carbon dioxide, oxygen); Compressed gases, n.o.s. (argon, carbon dioxide, helium) P-6290-B Date: December 2009

Praxair asks users of this product to study this MSDS and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this MSDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

Product: Compressed gases, n.o.s. (argon, carbon dioxide, oxygen); Compressed gases, n.o.s. (argon, carbon dioxide, helium) P-6290-B Date: December 2009

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The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair, Inc., it is the user's obligation to determine the conditions of safe use of the product.

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Praxair, Inc.  
39 Old Ridgebury Road  
Danbury, CT 06810-5113

## 1. Identification

<b>Product identifier</b>	<b>P-4 PVC Cement</b>
<b>Other means of identification</b>	
<b>Product code</b>	3100E
<b>Synonyms</b>	Part Numbers: 018050, 018096, 018116, 018135, 018355, 018051, 018097, 018117, 018136, 018394, 018052, 018099, 018118, 018138, 018729, 018053, 018100, 018120, 018139, 018886, 018076, 018101, 018121, 018140, 018887, 018077, 018102, 018122, 018141, 018888, 018078, 018103, 018124, 018143, 0907 205, 018079, 018105, 018125, 018144, 0907 210, 018080, 018106, 018126, 018145, 401354, 018081, 018107, 018127, 018146, 424972, 018082, 018109, 018128, 018147, B15942, 018083, 018110, 018129, 018148, B15942A, 018086, 018111, 018130, 018149, B15942B, 018092, 018112, 018131, 018154, B15942C, 018094, 018114, 018132, 018155, PV018088, 018095, 018115, 018134, 018271, PV018089
<b>Recommended use</b>	Joining PVC Pipes
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company Name</b>	William H. Harvey Company
<b>Address</b>	4334 South 67th Street Omaha, NE 68117
<b>Telephone</b>	402-331-1175
<b>E-mail</b>	info@oatey.com
<b>Transport Emergency</b>	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
<b>Emergency First Aid</b>	1-877-740-5015
<b>Contact person</b>	MSDS Coordinator

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 2
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.



<b>Response</b>	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.
<b>Supplemental information</b>	Not applicable.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	CAS number	%
Methyl ethyl ketone	78-93-3	25-40
Cyclohexanone	108-94-1	10-25
Furan, Tetrahydro-	109-99-9	10-25
Acetone	67-64-1	5-15
Polyvinyl chloride	9002-86-2	5-15

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

### Environmental precautions

## 7. Handling and storage

**Precautions for safe handling** Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm
	TWA	1 ppm

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
		200 ppm	

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3
		25 ppm
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3
		250 ppm
Methyl ethyl ketone (CAS 78-93-3)	TWA	590 mg/m3
		200 ppm
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3
		300 ppm
	TWA	590 mg/m3
		200 ppm

**Biological limit values**

**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	*
		Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofuran	Urine	*
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*

\* - For sampling details, please see the source document.

**Exposure guidelines**

**US - California OELs: Skin designation**

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

Cyclohexanone (CAS 108-94-1)

Skin designation applies.

**US - Tennessee OELs: Skin designation**

Cyclohexanone (CAS 108-94-1)

Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

Cyclohexanone (CAS 108-94-1)

Can be absorbed through the skin.

Furan, Tetrahydro- (CAS 109-99-9)

Can be absorbed through the skin.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Cyclohexanone (CAS 108-94-1)

Can be absorbed through the skin.

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Face shield is recommended. Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties****Appearance****Physical state**

Liquid.

**Form**

Translucent liquid.

**Color**

Clear.

**Odor**

Solvent.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

Not available.

**Initial boiling point and boiling range**

151 °F (66.11 °C)

**Flash point**

-4.0 °F (-20.0 °C)

**Evaporation rate**

5.5 - 8

**Flammability (solid, gas)**

Not available.

**Upper/lower flammability or explosive limits****Flammability limit - lower (%)**

1.8

**Flammability limit - upper (%)**

11.8

**Explosive limit - lower (%)**

Not available.

**Explosive limit - upper (%)**

Not available.

**Vapor pressure**

145 mm Hg @ 20 C

**Vapor density**

2.5

**Relative density**

0.9 +/- 0.02

**Solubility(ies)****Solubility (water)**

Negligible

<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	80 - 500 cP
<b>Other information</b>	
<b>VOC (Weight %)</b>	488 g/l SCAQMD 1168/M316A

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

### Symptoms related to the physical, chemical and toxicological characteristics

Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

### Information on toxicological effects

**Acute toxicity** May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	20 ml/kg
<i>Inhalation</i>		
LC50	Rat	50 mg/l, 8 Hours
<i>Oral</i>		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	948 mg/kg
<i>Inhalation</i>		
LC50	Rat	8000 ppm, 4 hours
<i>Oral</i>		
LD50	Rat	1540 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation.

<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Cyclohexanone (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS 9002-86-2)	3 Not classifiable as to carcinogenicity to humans.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Polyvinyl chloride (CAS 9002-86-2)	Cancer
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) > 100 mg/l, 96 hours
Cyclohexanone (CAS 108-94-1)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow (Pimephales promelas) 481 - 578 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

### Partition coefficient n-octanol / water (log Kow)

Acetone (CAS 67-64-1)	-0.24
Cyclohexanone (CAS 108-94-1)	0.81
Furan, Tetrahydro- (CAS 109-99-9)	0.46
Methyl ethyl ketone (CAS 78-93-3)	0.29

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

<b>UN number</b>	UN1993
<b>UN proper shipping name</b>	Flammable liquids, n.o.s. (Methyl ethyl ketone RQ = 12788 LBS, Acetone RQ = 50505 LBS)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	II
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB2, T7, TP1, TP8, TP28
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

### IATA

<b>UN number</b>	UN1993
<b>UN proper shipping name</b>	Flammable liquid, n.o.s. (Methyl ethyl ketone, Acetone)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	3H
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IMDG

<b>UN number</b>	UN1993
<b>UN proper shipping name</b>	FLAMMABLE LIQUID, N.O.S. (Methyl ethyl ketone, Acetone)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-E, S-E
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not available.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer
	Central nervous system
	Liver
	Blood
	Flammability

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - No
	Fire Hazard - Yes
	Pressure Hazard - No
	Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Acetone (CAS 67-64-1)	35 %WV
Methyl ethyl ketone (CAS 78-93-3)	35 %WV

**DEA Exempt Chemical Mixtures Code Number**

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

**US state regulations****US. Massachusetts RTK - Substance List**

Acetone (CAS 67-64-1)  
 Cyclohexanone (CAS 108-94-1)  
 Furan, Tetrahydro- (CAS 109-99-9)  
 Methyl ethyl ketone (CAS 78-93-3)

**US. New Jersey Worker and Community Right-to-Know Act**

Acetone (CAS 67-64-1)  
 Cyclohexanone (CAS 108-94-1)  
 Furan, Tetrahydro- (CAS 109-99-9)  
 Methyl ethyl ketone (CAS 78-93-3)  
 Polyvinyl chloride (CAS 9002-86-2)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Acetone (CAS 67-64-1)  
 Cyclohexanone (CAS 108-94-1)  
 Furan, Tetrahydro- (CAS 109-99-9)  
 Methyl ethyl ketone (CAS 78-93-3)

**US. Rhode Island RTK**

Acetone (CAS 67-64-1)  
 Cyclohexanone (CAS 108-94-1)  
 Furan, Tetrahydro- (CAS 109-99-9)  
 Methyl ethyl ketone (CAS 78-93-3)

**US. California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.



## International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	05-27-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0

### NFPA ratings



### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. William H. Harvey Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

# Safety Data Sheet



## SECTION 1: Identification

<b>Product Identifier</b>	<b>Propane</b>
<b>Other means of identification</b>	Commercial Propane(All); EGP; Export Grade Propane; HD5 Propane; LP-Gas; Liquefied Petroleum Gas; Odorized Propane; Propane (Unstened); Propane Commercial; Propane Motor Fuel; Propane for Process; Stened Propane; Unodorized Propane
<b>Relevant identified uses</b>	Fuel Chemical Chemical feedstock
<b>Uses advised against</b>	Other uses are not recommended unless an assessment demonstrates potential exposures will be controlled.
<b>24 Hour Emergency Phone Number</b>	CHEMTREC 1-800-424-9300 CHEMTREC México 01-800-681-9531

<b>Manufacturer/Supplier</b> Ferrellgas (Blue Rhino) One Liberty Plaza Liberty, MO 64068	<b>SDS Information</b> Phone: 855-738-9178 Email: <a href="mailto:Safety-fromFG.com@ferrellgas.com">Safety-fromFG.com@ferrellgas.com</a> URL: <a href="http://www.ferrellgas.com">www.ferrellgas.com</a>
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## SECTION 2: Hazard identification

Classified Hazards	Hazards Not Otherwise Classified (HNOC)
H220 - Flammable gases -- Category 1 H280 -- Gases under pressure -- Liquefied gas Simple asphyxiant	PHNOC: None known  HHNOC: None known

### Label Elements



#### DANGER

Extremely flammable gas  
Contains gas under pressure. May explode if heated.  
May displace oxygen and cause rapid suffocation



Keep away from heat/sparks/open flames/hot surfaces. - No smoking; Take precautionary measures against static discharge;  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely; Eliminate all ignition sources if safe to do so; Protect from sunlight. Store in a well-ventilated place

### SECTION 3: Composition/information on ingredients

Chemical Name	CASRN	Concentration <sup>1</sup>
Propane	74-98-6	80-100
Propene	115-07-1	<20
Ethane	74-84-0	<6
Butane	106-97-8	<5
Isobutane	75-28-5	<2.5

<sup>1</sup> All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

HD-5 COMPOSITION: Propane >90%, Propylene <5%

Odorized products contain small quantities (<0.1%) ethyl mercaptan as an olfactory indicator.

### SECTION 4: First aid measures

**Eye Contact:** For contact with the liquefied gas, remove contact lenses if present and easy to do, hold eyelids apart and gently flush the affected eye(s) with lukewarm water. Seek immediate medical attention.

**Skin Contact:** Liquefied gases may cause cryogenic burns or injury. Treat burned or frostbitten skin by flushing or immersing the affected area(s) in lukewarm water. Do not rub affected area. Do not remove clothing that adheres due to freezing. After sensation has returned to the frostbitten skin, keep skin warm, dry, and clean. If blistering occurs, apply a sterile dressing. Seek immediate medical attention.

**Inhalation:** If respiratory symptoms develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If breathing is difficult, oxygen or artificial respiration should be administered by qualified personnel. If symptoms persist, seek medical attention.

**Ingestion:** This material is a gas under normal atmospheric conditions and ingestion is unlikely.

**Most important symptoms and effects, both acute and delayed:** Light hydrocarbon gases are simple asphyxiants and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible if exposure is stopped, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death.

**Notes to Physician:** Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

### SECTION 5: Firefighting measures

#### NFPA 704 Hazard Class

Health: 2 Flammability: 4 Instability: 0



0 (Minimal)  
1 (Slight)  
2 (Moderate)  
3 (Serious)  
4 (Severe)

**Extinguishing Media:** Dry chemical or carbon dioxide is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

#### Specific hazards arising from the chemical

**Unusual Fire & Explosion Hazards:** Extremely flammable Contents under pressure This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe) Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air

explosion hazard indoors, in confined spaces, outdoors, or in sewers. If container is not properly cooled, it can rupture in the heat of a fire. Drains can be plugged and valves made inoperable by the formation of ice if rapid evaporation of large quantities of the liquefied gas occurs. Do not allow run-off from fire fighting to enter drains or water courses – may cause explosion hazard in drains and may reignite.

**Hazardous Combustion Products:** Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

**Special protective actions for fire-fighters:** For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done safely. Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures:** Extremely flammable Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Beware of accumulation of gas in low areas or contained areas, where explosive concentrations may occur. Prevent from entering drains or any place where accumulation may occur. Ventilate area and allow to evaporate. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

**Environmental Precautions:** Stop and contain spill/release if it can be done safely. Water spray may be useful in minimizing or dispersing vapors. If spill occurs on water notify appropriate authorities and advise shipping of any hazard.

**Methods and material for containment and cleaning up:** Notify relevant authorities in accordance with all applicable regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

## SECTION 7: Handling and storage

**Precautions for safe handling:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Extremely Flammable. Contents under pressure Gas can accumulate in confined spaces and limit oxygen available for breathing. Use only with adequate ventilation The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-70 and/or API RP 2003 for specific bonding/grounding requirements. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Cold burns may occur during filling operations. Containers and delivery lines may become cold enough to present cold burn hazard.

Propane and odorant are heavier than air and will collect and pool along the ground or floor. Odorant, therefore, may not be detectable above the location of propane storage or service (for example, odorant in propane released or leaked into the basement of a dwelling may not be detected above the basement).

WARNING - The intensity of the odorant may fade over prolonged storage or in the presence of rust, when placed initially in new or freshly-cleaned storage vessels, or when exposed to masonry.

**Conditions for safe storage:** Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Avoid exposing any part of a compressed-gas cylinder to temperatures above 125F(51.6C). Gas cylinders should be stored outdoors or in well ventilated storerooms at no lower than ground level and should be quickly removable in an emergency.

**SECTION 8: Exposure controls/personal protection**

Chemical Name	ACGIH	OSHA	Mexico	Phillips 66
Propane	---	TWA-8hr: 1000 ppm TWA-8hr: 1800 mg/m <sup>3</sup>	---	---
Propene	TWA-8hr: 500 ppm	---	Carcinogen	---
Butane	STEL: 1000 ppm	---	TWA-8hr: 800 ppm (VLE-PPT) TWA-8hr: 1900 mg/m <sup>3</sup> (VLE-PPT)	---
Isobutane	STEL: 1000 ppm	---	---	---

**Note:** State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

**Engineering controls:** If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

**Eye/Face Protection:** The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z.87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

**Skin/Hand Protection:** Wear thermal insulating gloves and face shield or eye protection when working with materials that present thermal hazards (hot or cold).

**Respiratory Protection:** A NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used in situations of oxygen deficiency (oxygen content less than 19.5 percent), unknown exposure concentrations, or situations that are immediately dangerous to life or health (IDLH).

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

**Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.**

**SECTION 9: Physical and chemical properties**

**Note:** Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

**Appearance:** Colorless  
**Physical Form:** Liquefied Gas  
**Odor:** No distinct odor (or skunk, rotten egg or garlic if odorant added)  
**Odor Threshold:** No data  
**pH:** Not applicable  
**Vapor Density (air=1):** >1  
**Upper Explosive Limits (vol % in air):** 9.5  
**Lower Explosive Limits (vol % in air):** 2.1  
**Evaporation Rate (nBuAc=1):** >1  
**Particle Size:** Not applicable  
**Percent Volatile:** 100%  
**Flammability (solid, gas):** Extremely Flammable

**Flash Point:** -156 °F / -104 °C  
**Test Method:** Tag Closed Cup (TCC), ASTM D56  
**Initial Boiling Point/Range:** -44 °F / -42 °C  
**Vapor Pressure:** 208 psia (Reid VP) @ 100°F / 37.8°C  
**Partition Coefficient (n-octanol/water) (Kow):** No data  
**Melting/Freezing Point:** -309 °F / -189 °C  
**Auto-ignition Temperature:** 842 °F / 450 °C  
**Decomposition Temperature:** No data  
**Specific Gravity (water=1):** 0.50-0.51 @ 60°F (15.6°C)  
**Bulk Density:** No data  
**Viscosity:** No data  
**Solubility in Water:** Negligible

**SECTION 10: Stability and reactivity**

Issue Date: 02/12/2018

**Reactivity:** Not chemically reactive.

**Chemical stability:** Stable under normal ambient and anticipated conditions of use.

**Possibility of hazardous reactions:** Hazardous reactions not anticipated.

**Conditions to avoid:** Avoid all possible sources of ignition. Heat will increase pressure in the storage tank.

**Incompatible materials:** Avoid contact with acids, aluminum chloride, chlorine, chlorine dioxide, halogens and oxidizing agents.

**Hazardous decomposition products:** Not anticipated under normal conditions of use.

## SECTION 11: Toxicological information

### Information on Toxicological Effects

#### Substance / Mixture

Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data
Inhalation	Unlikely to be harmful	Simple Asphyxiant. May displace oxygen and cause rapid suffocation. See section 4 for more information.	>20,000 ppm (gas, estimated)
Dermal	Skin absorption is not anticipated		Not applicable
Oral	Ingestion is not anticipated		Not applicable

**Aspiration Hazard:** Not applicable

**Skin Corrosion/Irritation:** Not expected to be irritating. Contact with the liquefied or pressurized gas may cause frostbite ("cold" burn).

**Serious Eye Damage/Irritation:** Not expected to be irritating. Contact with the liquefied or pressurized gas may cause momentary freezing followed by swelling and eye damage.

**Skin Sensitization:** Skin contact is not anticipated.

**Respiratory Sensitization:** Not expected to be a respiratory sensitizer.

**Specific Target Organ Toxicity (Single Exposure):** Not expected to cause organ effects from single exposure.

**Specific Target Organ Toxicity (Repeated Exposure):** Not expected to cause organ effects from repeated exposure.

**Carcinogenicity:** Not expected to cause cancer.

**Germ Cell Mutagenicity:** Not expected to cause heritable genetic effects.

**Reproductive Toxicity:** Not expected to cause reproductive toxicity.

**Other Comments:** High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus.

The odorant, ethyl mercaptan, can be irritating to the eyes, skin and respiratory tract. At high concentrations, a person can temporarily lose the ability to smell ethyl mercaptan. In addition, some individuals may have an impaired sense of smell, which inhibits the detection of the odorant.

### Information on Toxicological Effects of Components

#### Propane

**Reproductive Toxicity:** No adverse reproductive or developmental effects were observed in rats exposed to propane; no observed adverse effect level = 12,000 ppm.

**Target Organ(s):** No systemic or neurotoxic effects were noted in rats exposed to concentrations of propane as high as 12,000 ppm for 28 days.

#### Butane

*Reproductive Toxicity:* No adverse reproductive or developmental effects were observed in rats exposed to butane; no observed adverse effect level = 12,000 ppm.

*Target Organ(s):* No systemic or neurotoxic effects were noted in rats exposed to concentrations of butane as high as 9,000 ppm for 28 days.

**Isobutane**

*Reproductive Toxicity:* No adverse developmental effects were observed in rats exposed to concentrations of isobutane as high as 9000 ppm. Fertility and mating indices may have been affected at 9000 ppm but no effects were observed at 3000 ppm (NOAEL).

*Target Organ(s):* No systemic or neurotoxic effects were noted in rats exposed to concentrations of isobutane as high as 9,000 ppm for 28 days.

## SECTION 12: Ecological information

### GHS Classification:

**No classified hazards**

**Toxicity:** Petroleum gases will readily evaporate from the surface and would not be expected to have significant adverse effects in the aquatic environment.

**Persistence and Degradability:** The hydrocarbons in this material are expected to be inherently biodegradable. In practice, hydrocarbon gases are not likely to remain in solution long enough for biodegradation to be a significant loss process. Hydrogen sulfide, if present in refinery gas streams, will be rapidly oxidized in water and insoluble sulfides precipitated from water when metallic radicals are present.

**Bioaccumulative Potential:** Since the log Kow values measured for refinery gas constituents are below 3, they are not regarded as having the potential to bioaccumulate.

**Mobility in Soil:** Due to the extreme volatility of petroleum gases, air is the only environmental compartment in which they will be found. In air, these hydrocarbons undergo photodegradation by reaction with hydroxyl radicals with half-lives ranging from 3.2 days for n-butane to 7 days for propane.

**Other adverse effects:** None anticipated.

## SECTION 13: Disposal considerations

This material is a gas and would not typically be managed as a waste.

## SECTION 14: Transport information

### U.S. Department of Transportation (DOT)

**UN Number:** 1978 or 1075

**UN proper shipping name:** Propane,

**Transport hazard class(es):** 2.1

**Packing Group:** None

**Environmental Hazards:** This product does not meet the DOT/UN/IMDG/IMO criteria of a marine pollutant

**Special precautions for user:** *For domestic transportation only, UN1075 may be substituted for the UN number shown as long as the substitution is consistent on package markings, shipping papers, and emergency response information. See 49 CFR 172.102 Special Provision 19.*

*Containers of NON-ODORIZED liquefied petroleum gas must be marked either NON-ODORIZED or NOT ODORIZED as of September 30, 2006. [49 CFR 172.301(f), 326(d), 330(c) and 338(e)]*

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable

## SECTION 15: Regulatory information

### **CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds)**

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

### **CERCLA/SARA - Section 311/312 (Title III Hazard Categories)**

US EPA has published a final rule aligning hazardous chemical reporting under sections 311 and 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA) with OSHA HCS. See Section 2 for hazard classifications under EPCRA.

**CERCLA/SARA - Section 313 and 40 CFR 372**


This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

Chemical Name	Concentration <sup>1</sup>	de minimis
Propene	<20	1.0%

**EPA (CERCLA) Reportable Quantity (in pounds)**

EPA's Petroleum Exclusion applies to this material - (CERCLA 101(14)).

**California Proposition 65**

 **WARNING:** Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm are created by the combustion of propane. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**International Inventories**

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.  
All components are either on the DSL, or are exempt from DSL listing requirements.

**SECTION 16: Other information**

Issue Date:	Previous Issue Date:
2/12/2018	03/20/2017

**Revised Sections or Basis for Revision:**

Intended Use (Section 1)

**Guide to Abbreviations:**

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; HPR = Hazardous Products Regulations; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

**Disclaimer of Expressed and implied Warranties:**

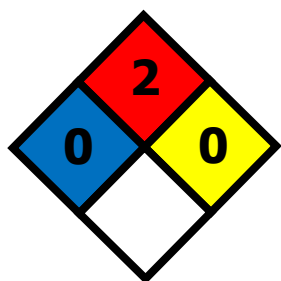
The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.



**Material Safety Data Sheet**



**NFPA**



**HMIS**

Health Hazard	0
Fire Hazard	2
Reactivity	0

Issuing Date **August 16, 2010**      Revision Date **November 18, 2013**      Revision Number **4**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name** STIHL 2-CYCLE HP ENGINE OIL

**Product Code** F-3A, 0781-319-8008, 0781-319-8009, 0781-319-8010, 0781-319-8044, 0781-319-8045, 0781-319-8051, 0781-319-8008, 7010-871-0177, 7010-871-0208

**Recommended Use** 2-cycle Engine Oil

**Manufactured by:** Omni Specialty Packaging  
10399 S. Hwy 1  
Shreveport, LA 71115  
Phone: 1 (318) 524-1100

**Emergency Telephone Number** CHEMTREC  
1 (800) 424-9300

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

**Appearance** Blue      **Physical State** Liquid      **Odor** Mild

**Potential Health Effects**

**Principal Routes of Exposure** Eye contact, Skin contact, Inhalation, Ingestion

**Acute Toxicity**

**Eyes** Practically non- irritating to the eye upon direct contact.

**Skin** Substance minimally irritating upon direct contact.

**Inhalation** Low hazard at standard temperatures and pressures. Inhalation of oil mist or fumes can cause irritation of the nose, throat and upper respiratory tract

**Ingestion** Do not ingest. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

<b>Other</b>	On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations.
<b>Chronic Effects</b>	Prolonged exposure may cause chronic effects.
<b>Aggravated Medical Conditions</b>	Personnel with pre-existing skin disorders should avoid contact with this product.
<b>Environmental Hazard</b>	See Section 12 for additional Ecological Information.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula Mixture

Chemical Name	CAS-No	Weight %
Petroleum Distillates, Hydrotreated Heavy Paraffinic	64742-54-7	10-20
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic	64742-65-0	70-80
Additive Package	Mixture	5-10
Dye	Mixture	0-0.1

### 4. FIRST AID MEASURES

<b>Eye Contact</b>	Flush with large amounts of water for 15 minutes. Get medical attention if eye irritation develops or persists. If material is hot, treat for thermal burns and take victim to the hospital immediately.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention immediately if skin discoloration occurs.
<b>Inhalation</b>	This material is not expected to present an inhalation exposure at ambient conditions
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Do not induce vomiting. Get immediate medical attention or advice.
<b>Notes to Physician</b>	Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Not flammable.
<b>Flash Point</b>	170°F
<b>Suitable Extinguishing Media</b>	Water Fog. Carbon dioxide (CO <sub>2</sub> ). Foam. Dry chemical.
<b>Unsuitable Extinguishing Media</b>	Not Available
<b>Hazardous Combustion Products</b>	Not Available
<b>Explosion Data</b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	Not sensitive.
<b>Protective Equipment and Precautions for Firefighters</b>	Wear positive pressure self-contained breathing apparatus (SCBA). Use water to cool containers exposed to flames. Structural firefighters' protective clothing will only provide limited protection. Mist or sprays may be flammable below the product normal flash point.

**NFPA** Health Hazard 0 Flammability 2 Stability 0 Physical and Chemical Hazards -

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautions** Use personal protective equipment. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. If spilled, take caution, as material can cause surfaces to become very slippery.

**Methods for Containment** Dike far ahead of liquid spill for later disposal.

**Methods for Cleaning Up** Pick up free liquid for recycle and/or disposal. Residual liquid and/or solid can be absorbed on inert material.

**Evacuation Procedures**  
**Large Spill** Consider initial downwind evacuate for at least 300 meters (1000 feet).  
**Fire** If tank, rail car or tank car is involved in a fire, isolate for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.

**Reporting Requirements** Spills that enter a water body must be reported immediately to the USEPA's National Response Center at (800)424-8802. Check with your local and state regulators regarding their reporting requirements.

**7. HANDLING AND STORAGE**

**Handling** Do not pressure, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode. See NFPA 30 and OSHA 1910.106 – flammable and combustible liquids.

**Storage** Store away from heat, sparks, open flame, or strong oxidizing agents in closed and properly labeled containers. Empty containers retain product residue (liquid, and/or vapor) and can be dangerous

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3

**Engineering Measures** Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended limits.

**Personal Protective Equipment**  
**Eye/Face Protection** Safety glasses with side-shields. If splashes are likely to occur, wear goggles. Full face-shield to be worn during emergencies.  
**Skin and Body Protection** As needed to prevent repeated skin contact. Solvent resistant gloves should be used if needed.  
**Respiratory Protection** Not normally needed. During emergencies wear respirator.

**Hygiene Measures** Remove and wash contaminated clothing before re-use. Wash hands before

breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Blue	<b>Odor</b>	Mild Petroleum Oder
<b>Physical State</b>	Liquid	<b>pH</b>	N/A
<b>Flash Point</b>	170°F	<b>Autoignition Temperature</b>	N/A
<b>Boiling Point/Range</b>	N/A	<b>Freezing Point</b>	0°F
<b>Explosion Limits</b>	N/A	<b>Flammability Limits in Air</b>	N/A
<b>Specific Gravity</b>	0.87	<b>Solubility</b>	Negligible
<b>Evaporation Rate</b>	N/A	<b>Vapor Pressure</b>	<0.01
<b>Vapor Density</b>	Not Determined	<b>Density</b>	N/A

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible Products</b>	Open Flame and strong oxidizing agents.
<b>Conditions to Avoid</b>	Heat, flames, and sparks.
<b>Hazardous Decomposition Products</b>	Decomposition and combustion products may include smoke, carbon dioxide, carbon monoxide, and toxic fumes.
<b>Hazardous Polymerization</b>	None under normal processing.

**11. TOXICOLOGICAL INFORMATION**

**Acute Toxicity**

<b>Product Information</b>	Test on similar materials show a low order of acute oral and dermal toxicity.
<b>Acute Oral Effects</b>	Test on similar materials indicates low order of acute toxicity.
<b>Acute Inhalation Effects</b>	Low acute toxicity expected on inhalation.
<b>Skin Effects</b>	Practically non-toxic if absorbed. Other similar highly refined products have not shown skin tumors in mouse skin painting studies.
<b>Eye Irritation</b>	Minimal irritation on contact. Eye irritation slightly or practically non-irritating base on similar products.

**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	Rat >2000 mg/kg	Rabbit >2000 mg/kg	Rat > 2.18 mg/L 4 hours
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	Rat >2000 mg/kg	Rabbit >2000 mg/kg	Rat > 2.18 mg/L 4 hours

**Chronic Toxicity**

<b>Chronic Toxicity</b>	Prolonged exposure may cause chronic effects.
<b>Carcinogenicity</b>	Not considered a potential carcinogen base on IP346 DMSO of less than 3.0 wt%
<b>Target Organ Effects</b>	Respiratory system, Eyes, Skin, Central nervous system (CNS)

**Genotoxicity** This product is considered non-mutagenic and has negative potential for tumor development based on from Modified Ames Assay, with Mutagenic Index of less than 1.0.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity** If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method** Dispose of in accordance with local regulations. Keep this product out of sewers and waterways.

**Contaminated Packaging** Dispose of in accordance with local regulations.

**14. TRANSPORT INFORMATION**

**DOT** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	Present	X	265-157-1	X	X	X	X	X
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	Present	X	265-169-7	X	X	X	X	X

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

- Acute Health Hazard No
- Chronic Health Hazard No
- Fire Hazard No
- Sudden Release of Pressure Hazard No
- Reactive Hazard No

**Clean Water Act**

If spilled into navigable waters it is reportable to National Response Center, 800-424-8802. Reportable Quantity = Oil Sheen present on navigable water surface. (40 CFR 116; 401.15)

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

**CERCLA**

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**Florida**

No listed ingredients are present

**Massachusetts RTK**

No listed ingredients are present

**Minnesota RTK**

No listed ingredients are present

**New Jersey RTK**

Lists petroleum oil, but this product does not contain hazardous ingredients.

**Pennsylvania RTK**

Lists petroleum oil, but this product does not contain hazardous ingredients greater than 3%.

**Illinois DOL TSL**

No listed ingredients are present

**International Regulations**

**Mexico – Grade**

No information available.

**Canada**

Not listed on the Canadian Controlled Product Ingredient Disclosure and is compliant with Controlled Products Regulation

**CONEG Metals**

Since cadmium, chromium, lead and mercury are not detectable and it does not exceed 100 ppm total in this product, it is compliant with CONEG Metals regulation.

**EEC (Europe)**

This product is not known to be a dangerous good internationally.

No known R-Phrases or S-Phrases

Hazard Label None

Danger Symbol None

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.**

**WHMIS Hazard Class**

D2B Toxic materials

**16. OTHER INFORMATION**

<b>Prepared By</b>	Jim Prothro
<b>Issuing Date</b>	August 16, 2010
<b>Revision Date</b>	November 18, 2013
<b>Revision Note</b>	Updated product numbers

**Disclaimer**

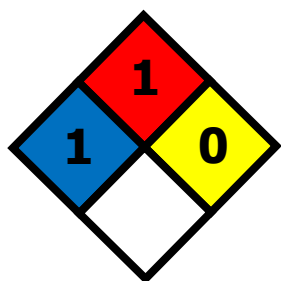
The information provided on this MSDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

The End

## Material Safety Data Sheet



### NFPA



### HMIS

Health Hazard	1
Fire Hazard	1
Reactivity	0

Issuing Date 16-August-2010      Revision Date 16-August-2010      Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** STIHL UNIVERSAL 2-CYCLE ENGINE OIL

**Product Code**

**Recommended Use**

**Manufactured by:** Omni Specialty Packaging  
10399 S. Hwy 1  
Shreveport, LA 71115  
Phone: 1 (318) 524-1100

**Emergency Telephone Number** CHEMTREC  
1 (800) 424-9300

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

**Appearance** Blue Liquid      **Physical State** Liquid      **Odor** Mild petroleum odor

### Potential Health Effects

**Principal Routes of Exposure** Eye contact, Skin contact, Inhalation, Ingestion

### Acute Toxicity

**Eyes** Practically non-irritating to the eye upon direct contact.

**Skin** Substance minimally irritating upon direct contact. May cause irritation/dermatitis.

**Inhalation** Low hazard at standard temperatures and pressures. Inhalation of oil mist or fumes can cause irritation of the nose, throat and upper respiratory tract

**Ingestion** Do not ingest. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

- Other** On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations.
- Chronic Effects** Prolonged exposure may cause chronic effects.
- Aggravated Medical Conditions** Personnel with pre-existing skin disorders should avoid contact with this product.
- Environmental Hazard** See Section 12 for additional Ecological Information.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula Mixture

Chemical Name	CAS-No	Weight %
Petroleum Distillates, Hydrotreated Heavy Paraffinic	64742-54-7	Blend
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic	64742-65-0	Blend
Residual Oils (petroleum). Solvent Dewaxed	64742-62-7	Blend
RESIDUAL Oils (petroleum), Hydrotreated	64742-57-0	Blend
Stoddard Solvent	8052-41-3	7
Additive Package	Mixture	<7
Dye	Mixture	0.08

**4. FIRST AID MEASURES**

- Eye Contact** Flush with large amounts of water for 15 minutes. Get medical attention if eye irritation develops or persists. If material is hot, treat for thermal burns and take victim to the hospital immediately.
- Skin Contact** Wash with soap and water. Remove contaminated clothes and wash before reuse. Get medical attention if skin discolor develops
- Inhalation** This material is not expected to present an inhalation exposure at ambient conditions
- Ingestion** Do not induce vomiting. Get immediate medical attention or advice..
- Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

- Flammable Properties** Not flammable
- Flash Point** 210°F
- Suitable Extinguishing Media** Water Fog. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical.
- Unsuitable Extinguishing Media** Not Available
- Hazardous Combustion Products** Not Available
- Explosion Data**
  - Sensitivity to Mechanical Impact** Not sensitive.
  - Sensitivity to Static Discharge** Not sensitive.
- Protective Equipment and Precautions for Firefighters** Wear positive pressure self-contained breathing apparatus (SCBA). Use water to cool containers exposed



to flames. Structural firefighters' protective clothing will only provide limited protection. Mist or sprays may be flammable below the product normal flash point.

**NFPA** Health Hazard 1 Flammability 1 Stability 0 Physical and Chemical Hazards -

**6. ACCIDENTAL RELEASE MEASURES**

- Personal Precautions** Use personal protective equipment. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. If spilled, take caution, as material can cause surfaces to become very slippery.
- Methods for Containment** Dike far ahead of liquid spill for later disposal.
- Methods for Cleaning Up** Pick up free liquid for recycle and/or disposal. Residual liquid and/or solid can be absorbed on inert material.
- Evacuation Procedures**  
**Large Spill** Consider initial downwind evacuate for at least 300 meters (1000 feet).  
**Fire** If tank, rail car or tank car is involved in a fire, isolate for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.
- Reporting Requirements** Spills that enter a water body must be reported immediately to the USEPA's National Response Center at 424-8802. Check with your local and state regulators regarding their reporting requirements.

**7. HANDLING AND STORAGE**

- Handling** Do not pressure, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode. See NFPA 30 and OSHA 1910.106 – flammable and combustible liquids.
- Storage** Store away from heat, sparks, open flame, or strong oxidizing agents in closed and properly labeled containers. Empty containers retain product residue (liquid, and/or vapor) and can be dangerous

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3
Residual Oils (petroleum). Solvent Dewaxed 64742-62-7	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3
RESIDUAL Oils (petroleum), Hydrotreated 64742-57-0	5 mg/m3 8 hour(s). Form: Mist	5 mg/m3 8 hour(s). Form: Mist	2,500 mg/m3
Stoddard Solvent 8052-41-3	100 ppm (TWA)	500 ppm (TWA)	20000 mg/m3

<b>Engineering Measures</b>	Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended limits.
<b>Personal Protective Equipment</b>	
<b>Eye/Face Protection</b>	Safety glasses with side-shields. If splashes are likely to occur, wear goggles. Full face-shield to be worn during emergencies.
<b>Skin and Body Protection</b>	As needed to prevent repeated skin contact. Solvent resistant gloves should be used if needed.
<b>Respiratory Protection</b>	Not normally needed. During emergencies wear respirator.
<b>Hygiene Measures</b>	Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Blue Liquid	<b>Odor</b>	Mild Petroleum Oder
<b>Physical State</b>	Liquid	<b>pH</b>	N/A
<b>Flash Point</b>	210°F	<b>Autoignition Temperature</b>	N/A
<b>Boiling Point/Range</b>	N/A	<b>Freezing Point</b>	-30°F
<b>Explosion Limits</b>	N/A	<b>Flammability Limits in Air</b>	N/A
<b>Specific Gravity</b>	0.87	<b>Solubility</b>	Negligible
<b>Evaporation Rate</b>	N/A	<b>Vapor Pressure</b>	<0.01
<b>Vapor Density</b>	Not Determined	<b>Density</b>	N/A

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible Products</b>	Open Flame and strong oxidizing agents.
<b>Conditions to Avoid</b>	Heat, flames, and sparks.
<b>Hazardous Decomposition Products</b>	Decomposition and combustion products may include smoke, carbon dioxide, carbon monoxide, and toxic fumes.
<b>Hazardous Polymerization</b>	None under normal processing.

**11. TOXICOLOGICAL INFORMATION**

**Acute Toxicity**

<b>Product Information</b>	Test on similar materials show a low order of acute oral and dermal toxicity.
<b>Acute Oral Effects</b>	Test on similar materials indicates low order of acute toxicity.
<b>Acute Inhalation Effects</b>	Low acute toxicity expected on inhalation.
<b>Skin Effects</b>	Practically non-toxic if absorbed. Other similar highly refined products have not shown skin tumors in mouse skin painting studies.
<b>Eye Irritation</b>	Minimal irritation on contact. Eye irritation slightly or practically non-irritating base on similar products.

**Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	Rat >2000 mg/kg	Rabbit >2000 mg/kg	Rat > 2.18 mg/L 4 hours

Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	Rat >2000 mg/kg	Rabbit >2000 mg/kg	Rat > 2.18 mg/L 4 hours
Residual Oils (petroleum). Solvent Dewaxed 64742-62-7	Rat >2000 mg/kg	Rabbit >2000 mg/kg	Rat > 2.18 mg/L 4 hours
RESIDUAL Oils (petroleum), Hydrotreated 64742-57-0	Rat >2000 mg/kg	Rabbit >2000 mg/kg	Rat > 2.18 mg/L 4 hours
Stoddard Solvent 8052-41-3	Not Available	Not Available	Not Available

**Chronic Toxicity**

**Chronic Toxicity** Prolonged exposure may cause chronic effects.

**Carcinogenicity** Not considered a potential carcinogen base on IP346 DMSO of less than 3.0 wt%

**Target Organ Effects** Respiratory system, Eyes, Skin, Central nervous system (CNS)

**Genotoxicity** This product is considered non-mutagenic and has negative potential for tumor development based on from Modified Ames Assay, with Mutagenic Index of less than 1.0.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Method** Dispose of in accordance with local regulations. Keep this product out of sewers and waterways.

**Contaminated Packaging** Dispose of in accordance with local regulations.

Chemical Name	RCRA – Halogenated Organic Compounds	RCRA – P Series Wastes	RCRA – F Series Wastes	RCRA – K Series Wastes
	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria	Does not meet hazardous waste criteria

**14. TRANSPORT INFORMATION**

**DOT** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

	<b>TSCA</b>	<b>DSL</b>	<b>EINECS/ELINCS</b>	<b>ENCS</b>	<b>IECSC</b>	<b>KECL</b>	<b>PICCS</b>	<b>AICS</b>
Petroleum Distillates, Hydrotreated Heavy Paraffinic 64742-54-7	Present	X	265-157-1	X	X	X	X	X
Petroleum Distillates, Solvent Dewaxed heavy Paraffinic 64742-65-0	Present	X	265-169-7	X	X	X	X	X
Residual Oils (petroleum). Solvent Dewaxed 64742-62-7	Present	X	265-166-0	X	X	X	X	X
RESIDUAL Oils (petroleum), Hydrotreated 64742-57-0	Present	X	265-160-8	X	X	X	X	X
Stoddard Solvent 8052-41-3	Present	X	232-489-3	X	X	X	X	X

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

**Acute Health Hazard** No  
**Chronic Health Hazard** No  
**Fire Hazard** No  
**Sudden Release of Pressure Hazard** No  
**Reactive Hazard** No

**Clean Water Act**

If spilled into navigable waters it is reportable to National Response Center, 800-424-8802. Reportable Quantity = Oil Sheen present on navigable water surface. (40 CFR 116; 401.15)

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPS) (see 40 CFR 61)**

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

**CERCLA**

**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**Florida**

No listed ingredients are present

**Massachusetts RTK**

Lists 8052-41-3

**Minnesota RTK**

Lists 8052-41-3

**New Jersey RTK**

Lists petroleum oil, but this product does not contain hazardous ingredients. Lists 8052-41-3

**Pennsylvania RTK**

Lists petroleum oil, but this product does not contain hazardous ingredients greater than 3%. Lists 8052-41-3

**Illinois DOL TSL**

No listed ingredients are present

**International Regulations**

<b>Mexico – Grade</b>	No information available.	
<b>Canada</b>	Not listed on the Canadian Controlled Product Ingredient Disclosure and is compliant with Controlled Products Regulation	
<b>CONEG Metals</b>	Since cadmium, chromium, lead and mercury are not detectable and it does not exceed 100 ppm total in this product, it is compliant with CONEG Metals regulation.	
<b>EEC (Europe)</b>	This product is not known to be a dangerous good internationally.	
	R-Phrases	R45 : May cause cancer. R46 : May cause heritable genetic damage. R65 : Harmful: may cause lung damage if swallowed.
	S-Phrases	S53 : Avoid exposure - obtain special instructions before use. S45 : In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
	Hazard Label	None
	Danger Symbol	None

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.**

**WHMIS Hazard Class**

D2B Toxic materials

**16. OTHER INFORMATION**

<b>Prepared By</b>	Safety Department
<b>Issuing Date</b>	16-August-2010
<b>Revision Date</b>	16-August-2010
<b>Revision Note</b>	Not applicable

**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

**1 Identification of the substance and manufacturer**

**Trade name:** STRIPE HOT PINK FLUORESCENT  
**Product code:** 0000160679  
**Product category:** PC9a Paints and coatings.  
**Manufacturer/Supplier:** Seymour of Sycamore  
 917 Crosby Avenue  
 Sycamore, IL 60178  
 phone: 815-895-9101  
 www.seymourpaint.com  
**Emergency telephone number:** CHEMTEL 1-800-255-3924, or 813-248-0585.

**2 Hazard(s) identification**

**Classification of the substance or mixture**

Flam. Aerosol 1 H222 Extremely flammable aerosol.  
 Press. Gas H280 Contains gas under pressure; may explode if heated.  
 STOT SE 3 H335 May cause respiratory irritation.  
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

**GHS Hazard pictograms**



GHS02 GHS04 GHS07 GHS08

**Signal word**  
**Hazard statements**

Danger  
 Extremely flammable aerosol.  
 Contains gas under pressure; may explode if heated.  
 May cause respiratory irritation.  
 May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 Do not spray on an open flame or other ignition source.  
 Do not pierce or burn, even after use.  
 Use only outdoors or in a well-ventilated area.  
 Do not breathe dust/fume/gas/mist/vapors/spray.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 Call a POISON CENTER/doctor if you feel unwell.  
 Store locked up.  
 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
 Protect from sunlight. Store in a well-ventilated place.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

**3 Composition/information on ingredients**

**Chemical characterization: Mixtures**

**Chemical Description:** This product is a mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

64742-89-8	VM&P Naphtha	18.5%
74-98-6	propane	15.11%
1317-65-3	Calcium Carbonate	11.62%
106-97-8	n-butane	8.88%
64742-47-8	Mineral Spirits	3.74%
110-19-0	Isobutyl Acetate	3.26%

**4 First-aid measures**

**After inhalation:** Supply fresh air; consult doctor in case of complaints.  
**After skin contact:** Remove contaminated clothing. Wash exposed area with soap and water.  
**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.  
**After swallowing:** Rinse out mouth and then drink plenty of water.  
 Rinse mouth with water. Do not induce vomiting.  
**Most important symptoms and effects:** Dizziness  
**Indication of any immediate medical attention needed:** No further relevant information available.

**5 Fire-fighting measures**

**Extinguishing agents:** CO2, extinguishing powder or water spray. Fight larger fires with water spray.  
**Special hazards:** Can form explosive gas-air mixtures.  
**Protective equipment for firefighters:** A respiratory protective device may be necessary.

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Wear protective equipment. Keep unprotected persons away.  
 Use respiratory protective device against the effects of fumes/dust/aerosol.

(Contd. on page 2)

## Safety Data Sheet

Printing date 11/11/2016

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**Trade name: STRIPE HOT PINK FLUORESCENT**

(Contd. of page 1)

**Methods and material for containment and cleaning up:** Ensure adequate ventilation.

**7 Handling and storage**

**Precautions for safe handling:** Use only in well ventilated areas.  
**Storage requirements:** Keep away from sources of heat and direct sunlight. Do not warehouse in subfreezing conditions. Store locked up.

**8 Exposure controls/personal protection****Components with limit values that require monitoring at the workplace:****74-98-6 propane**

PEL (United States GHS) Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm  
 REL (United States GHS) Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm  
 TLV (United States GHS) refer to Appendix F in TLVs&BEIs book; NIC-EX

**106-97-8 n-butane**

REL (United States GHS) Long-term value: 1900 mg/m<sup>3</sup>, 800 ppm  
 TLV (United States GHS) Short-term value: (2370) mg/m<sup>3</sup>, (1000) ppm  
 NIC-EX

**110-19-0 Isobutyl Acetate**

PEL (United States GHS) Long-term value: 700 mg/m<sup>3</sup>, 150 ppm  
 REL (United States GHS) Long-term value: 700 mg/m<sup>3</sup>, 150 ppm  
 TLV (United States GHS) Short-term value: 172 mg/m<sup>3</sup>, 150 ppm  
 Long-term value: 238 mg/m<sup>3</sup>, 50 ppm

**Hygienic protection:** Keep away from foodstuffs and animal feed. Wash hands after use.  
 Wash hands after use.  
 Do not eat or drink while working.

**Breathing equipment:** A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. If you suspect overexposure conditions exist, please consult an authority on chemical hygiene.

**Hand protection:** Nitrile gloves.  
 Protective gloves. The glove material must be impermeable and resistant to the substance.

**Eye protection:** Tightly sealed goggles

**9 Physical and chemical properties**

**Appearance:** Aerosol.  
**Odor:** Aromatic  
**Odor threshold:** Not determined.

**pH-value:** Not determined.  
**Melting point/Melting range:** Undetermined.  
**Boiling point:** -44 °C (-47 °F)

**Flash point:** -19 °C (-2 °F)  
**Flammability (solid, gas):** Extremely flammable.

**Decomposition temperature:** Not determined.  
**Auto igniting:** Product is not self-igniting.

**Danger of explosion:** In use, may form flammable/explosive vapour-air mixture.  
**Lower Explosion Limit:** 1.7 Vol %  
**Upper Explosion Limit:** 10.9 Vol %

**Vapor pressure:** Not determined.  
**Relative Density:** Between 0.77 and 0.85 (Water equals 1.00)  
**Vapor density:** Not determined.  
**Evaporation rate:** Not applicable.  
**Partition coefficient: n-octanol/water:** Not determined.

**Solubility:** Not determined.  
**Viscosity:** Not determined.  
**VOC content (less exempt solvents):** 50.7 %  
**Water:** 24.8 %  
**Solids content:** 23.4 %

**10 Stability and reactivity**

**Reactivity:** Stable at normal temperatures.  
**Conditions to avoid:** Do not allow can to exceed 120 degrees Fahrenheit. Do not warehouse in subfreezing temperatures.

**Chemical stability:** Not fully evaluated.  
**Possibility of hazardous reactions:** No dangerous reactions known.  
**Incompatible materials:** No further relevant information available.  
**Hazardous decomposition:** No dangerous decomposition products known.

(Contd. on page 3)

## Safety Data Sheet

Printing date 11/11/2016

Revised On 03/08/2016

Trade name: STRIPE HOT PINK FLUORESCENT

(Contd. of page 2)

## 11 Toxicological information

## LD/LC50 values that are relevant for classification:

## 106-97-8 n-butane

Inhalative LC50/4 h 658 mg/l (rat)

## 110-19-0 Isobutyl Acetate

Oral LD50 4763 mg/kg (rbt)

Information on toxicological effects: No data available.

Skin effects: No irritant effect.

Eye effects: No irritating effect.

Sensitization: No sensitizing effects known.

## Carcinogenic categories

## IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

## NTP (National Toxicology Program)

None of the ingredients is listed.

## 12 Ecological information

Aquatic toxicity: Hazardous for water, do not empty into drains.

Persistence and degradability: The product is degradable after prolonged exposure to natural weathering processes.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Other adverse effects: No further relevant information available.

## 13 Disposal considerations

Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.

Recommendation: Completely empty cans should be recycled.

## 14 Transport information

UN-Number	UN1950
DOT	N/A
	UN1950
DOT	Consumer Commodity ORM-D
	AEROSOLS, flammable
ADR	1950 AEROSOLS
Transport hazard class(es):	
Class	2.1
Marine pollutant:	No
Special precautions for user:	Warning: Gases
EMS Number:	F-D,S-U
Packaging Group:	--
UN "Model Regulation":	UN1950, AEROSOLS, 2.1

## 15 Regulatory information

## SARA Section 355 (extremely hazardous substances):

None of the ingredients in this product are listed.

## SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

CPSC: This product complies with 16 CFR 1303 and does not contain more than 90 ppm of lead.

## California Proposition 65 chemicals known to cause cancer:

100-41-4 ethyl benzene

## CANADIAN ENVIRONMENTAL

## PROTECTION ACT:

## WHMIS Symbols for Canada:

All hazardous ingredients for this product appear on the Canadian Domestic Substance List.  
A - Compressed gas

## EPA:

110-19-0 Isobutyl Acetate

D

## 16 Other information

Contact:	Regulatory Affairs
Date of preparation / last revision	11/11/2016 / -



GENERAL PAINT & CHEMICALS -- TRU-TEST SUPREME XO-RUST ALUMINUM & (SUPP  
D -- 8010-00N020477

=====  
MSDS Safety Information  
=====

FSC: 8010  
MSDS Date: 07/24/1990  
MSDS Num: BLHXQ  
LIIN: 00N020477  
Tech Review: 08/01/1995  
Product ID: TRU-TEST SUPREME XO-RUST ALUMINUM & (SUPP D  
Responsible Party  
Cage: GENE  
Name: GENERAL PAINT & CHEMICALS  
Address: 201 JANDUS ROAD  
City: CARY IL 60013 US  
Info Phone Number: 708-639-5383  
Emergency Phone Number: 800-228-5635  
Review Ind: N

=====  
Contractor Summary  
=====

Cage: GENE  
Name: GENERAL PAINT & CHEMICAL  
Address: 201 JANDUS ROAD  
City: CARY IL 60013  
Country: NK  
Phone: (312) 639-5383

=====  
Ingredients  
=====

Cas: 64742-88-7  
Name: MINERAL SPIRITS. VP: 2.0@20C.  
% by Wt: 42-47  
OSHA PEL: 500 PPM  
ACGIH TLV: 200 PPM  
Ozone Depleting Chemical: N

-----  
Cas: 108-88-3  
RTECS #: XS5250000  
Name: TOLUENE (SARA III)  
% by Wt: <5  
OSHA PEL: 200 PPM/150 STEL  
ACGIH TLV: 50 PPM; 9293  
EPA Rpt Qty: 1000 LBS  
DOT Rpt Qty: 1000 LBS  
Ozone Depleting Chemical: N

-----  
Cas: 111-76-2  
RTECS #: KJ8575000  
Name: 2-BUTOXYETHANOL  
% by Wt: 21-26  
OSHA PEL: S, 50 PPM  
ACGIH TLV: S, 25 PPM; 9293  
Ozone Depleting Chemical: N

-----  
Cas: 141-78-6

RTECS #: AH5425000  
Name: ETHYL ACETATE (SARA III)  
% by Wt: 20-25  
OSHA PEL: 400 PPM  
ACGIH TLV: 400 PPM; 9192  
EPA Rpt Qty: 5000 LBS  
DOT Rpt Qty: 5000 LBS  
Ozone Depleting Chemical: N

=====  
Health Hazards Data  
=====

LD50 LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.  
Route Of Entry Inds - Inhalation: YES  
Skin: YES  
Ingestion: NO  
Carcinogenicity Inds - NTP: NO  
IARC: NO  
OSHA: NO  
Effects of Exposure: SEVERE EYE IRRITATION, DRYING OF SKIN, EXCESSIVE  
INHALATION CAUSES HEADACHE, DIZZINESS AND NAUSEA.  
Explanation Of Carcinogenicity: NOT RELEVANT.  
Signs And Symptions Of Overexposure: SEE HEALTH HAZARDS.  
Medical Cond Aggravated By Exposure: NONE KNOWN TO GENERAL PAINT AND  
CHEMICAL CO.  
First Aid: EYE: WASH WITH WATER FOR AT LEAST 15 MIN. SKIN: WASH WITH  
WARM  
SOAP AND WATER. INHAL: REMOVE TO FRESH AIR. APPLY ARTF RESP IF  
NECESSARY. GET MED ATTN. INGEST: DO NOT INDUCE VOMIT. KEEP PERSON  
WARM  
AND QUIET. GET MED ATTN.

=====  
Handling and Disposal  
=====

Spill Release Procedures: ELIMINATE ALL IGNITION SOURCES. CONTAIN  
SPILL,  
ABSORB LIQUID CLAY, SAND OR FLOOR ABSORBENT. PREVENT RUN-OFF TO  
SEWERS,  
STREAMS OR OTHER BODIES OF WATER.  
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.  
Waste Disposal Methods: CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A  
LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.  
Handling And Storage Precautions: KEEP AWAY FROM HEAT SPARKS AND OPEN  
FLAMES. FOR STORAGE CONDITIONS SEE OSHA 1910.106.  
Other Precautions: DO NOT TAKE INTERNALLY. AVOID PROLONGED CONTACT WITH  
SKIN. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF  
MORE THAN 2-3 INCHES WHEN POURING.

=====  
Fire and Explosion Hazard Information  
=====

Flash Point Text: <20F, <-7C  
Extinguishing Media: FOAM, CO2, DRY CHEMICAL, WATER FOG.  
Fire Fighting Procedures: WEAR NIOSH/MSHA APPRVD SCBA & FULL PROT  
EQUI (FP  
N). TREAT AS VOLATILE FIRE. H2O SPRAY MAY BE INEFT. IF H2O SPRAY IS  
USED, FOG NOZZLES ARE PREFERRABLE.  
Unusual Fire/Explosion Hazard: CLOSED CONTAINERS MAY EXPLODE WHEN  
EXPOSED

TO EXTREME HEAT. ISOLATE FROM HEAT, SPARKS AND OPEN FLAME.

=====  
Control Measures  
=====

Respiratory Protection: NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IF TLV

LIMITS ARE EXCEEDED. APPROVED MECHANICAL FILTER TO REMOVE SOLID AIRBORNE

PARTICLES OF OVERSPRAY DURING SPRAY APPLICATION.

Ventilation: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST)

VENTILATION TO MAINTAIN EXPOSURE BELOW TLV.

Protective Gloves: IMPERVIOUS GLOVES (FP N).

Eye Protection: CHEMICAL WORKERS GOGGLES (FP N).

Other Protective Equipment: IMPERVIOUS CLOTHING AND BOOTS.

Work Hygienic Practices: WASH HANDS BEFORE EATING, SMOKING OR USING BATHROOM. DO NOT REUSE CONTAMINATED CLOTHING.

Supplemental Safety and Health: MFR TRADE NAME/PART NO: GALVANIZED METAL PRIMER.

=====  
Physical/Chemical Properties  
=====

HCC: F2

B.P. Text: 170F, 77C

Vapor Density: HEAVIER

Evaporation Rate & Reference: SLOWER THAN ETHER

Appearance and Odor: NONE SPECIFIED BY MANUFACTURER.

Percent Volatiles by Volume: 95

=====  
Reactivity Data  
=====

Stability Condition To Avoid: ISOLATE FROM HEAT AND OPEN FLAME.

Materials To Avoid: AVOID CONTACT WITH STRONG OXIDIZING AGENTS.

Hazardous Decomposition Products: CARBON DIOXIDE, CARBON MONOXIDE.

Conditions To Avoid Polymerization: NONE SPECIFIED BY MANUFACTURER.

=====  
Toxicological Information  
=====

=====  
Ecological Information  
=====

=====  
MSDS Transport Information  
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=====  
Regulatory Information  
=====

=====  
Other Information  
=====

=====  
Transportation Information  
=====

Responsible Party Code: GENE A

Trans ID NO: 25143

Product ID: TRU-TEST SUPREME XO-RUST ALUMINUM & (SUPP D

MSDS Prepared Date: 07/24/1990

Review Date: 12/16/1991  
Article W/O MSDS: N  
Multiple KIT Number: 0  
Unit Of Issue: NK  
Container QTY: NK

=====  
Detail DOT Information  
=====

DOT PSN Code: GJF  
Symbols: G  
DOT Proper Shipping Name: FLAMMABLE LIQUIDS, N.O.S.  
Hazard Class: 3  
UN ID Num: UN1993  
DOT Packaging Group: I  
Label: FLAMMABLE LIQUID  
Special Provision: T42  
Non Bulk Pack: 201  
Bulk Pack: 243  
Max Qty Pass: 1 L  
Max Qty Cargo: 30 L  
Vessel Stow Req: E

=====  
Detail IMO Information  
=====

IMO PSN Code: HIM  
IMO Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. o  
IMDG Page Number: 3126  
UN Number: 1993  
UN Hazard Class: 3.1  
IMO Packaging Group: I/II  
Subsidiary Risk Label: -  
EMS Number: 3-07  
MED First Aid Guide NUM: T

=====  
Detail IATA Information  
=====

IATA UN ID Num: 1993  
IATA Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. \*  
IATA UN Class: 3  
IATA Label: FLAMMABLE LIQUID  
UN Packing Group: I  
Packing Note Passenger: 302  
Max Quant Pass: 1L  
Max Quant Cargo: 30L  
Packaging Note Cargo: 303  
Exceptions: A3

=====  
Detail AFI Information  
=====

AFI Symbols: \*  
AFI Proper Shipping Name: FLAMMABLE LIQUIDS, N.O.S.  
AFI Hazard Class: 3  
AFI UN ID NUM: UN1993  
AFI Packing Group: I  
Special Provisions: P3  
Back Pack Reference: A7.3

HAZCOM Label

=====  
Product ID: TRU-TEST SUPREME XO-RUST ALUMINUM & (SUPP D  
Cage: GENE  
Company Name: GENERAL PAINT & CHEMICAL  
Street: 201 JANDUS ROAD  
City: CARY IL  
Zipcode: 60013  
Country: NK  
Health Emergency Phone: 800-228-5635  
Date Of Label Review: 10/29/1991  
Label Date: 10/29/1991  
Chronic Hazard IND: N  
Eye Protection IND: YES  
Skin Protection IND: YES  
Signal Word: DANGER  
Respiratory Protection IND: YES  
Health Hazard: Moderate  
Contact Hazard: Severe  
Fire Hazard: Severe  
Reactivity Hazard: None  
Hazard And Precautions: FLAMMABLE LIQUID.ACUTE: CAUSES SEVERE EYE  
IRRITATION, DRYING OF SKIN. EXCESSIVE INHALATION CAUSES HEADACHE,  
DIZZINESS AND NAUSEA. CHRONIC: NONE LISTED BY MANUFACTURER.  
=====

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for the suitability of this information to their particular situation  
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# SAFETY DATA SHEET



This Safety Data Sheet (SDS) complies with the requirements of the U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2012) and equivalent state Standards. It has also been developed in accordance with the United Nations Globally Harmonized System of Classification of Chemicals (GHS) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Refer to Section 16 of this document for the definition of terms and abbreviations.

## SECTION 1: IDENTIFICATION

### 1.1 PRODUCT IDENTIFIER

- ITEM NUMBER(S): 180391
- ZEP NUMBER: A00811
- PRODUCT NAME: **WAXIE-Green Magnet Dust Mop Treatment**

### 1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE

- RECOMMENDED USE: Cleaning agent.
- IDENTIFIED USERS: For sale to, use and storage by service persons only.

### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

- MANUFACTURER/  
SUPPLIER: WAXIE Sanitary Supply
- ADDRESS: 9353 Waxie Way; San Diego, CA 92123-1036
- BUSINESS PHONE: 1-800-995-4466
- EMERGENCY PHONE: 1-800-255-3924 (CHEMTEL; 24 hours)

### 1.4 OTHER PERTINENT INFORMATION

- This product is sold and used in relatively small volumes. This SDS has been developed to address safety concerns affecting small volume handling situations and those involving warehouses and workplaces where large numbers of these items are stored or distributed.

## SECTION 2: HAZARD IDENTIFICATION

### 2.1 EMERGENCY OVERVIEW

Appearance	Aerosol containing a liquefied gas
Color	No data available
Odor	No data available

### 2.2 GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

#### OSHA/HCS Status

Classification of the Substance or Mixture: Gases under Pressure (Liquefied Gas)

### 2.3 LABEL ELEMENTS (suggested)

#### Hazard Pictograms:



Signal Word:

Warning.

Hazard Statements:

Contains gas under pressure; may explode if heated.

## SECTION 2: HAZARD IDENTIFICATION (Continued)

### Precautionary Statements

- Prevention:** Keep out of reach of children. Read label before use.
- Storage:** Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

### 2.4 OTHER PERTINENT HAZARDS NOT OTHERWISE CLASSIFIED

- **Carcinogenicity:**

<b>IARC</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.
<b>OSHA</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
<b>NTP</b>	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

### 3.1 SUBSTANCES/MIXTURES

- **Hazardous Components:**

CHEMICAL	CAS NUMBER	% (v/v)
Propane	74-98-6	>= 1 - < 5

## SECTION 4: FIRST AID MEASURES

### 4.1 DESCRIPTION OF FIRST AID MEASURES

- General advice:** Do not leave the victim unattended. Move out of dangerous area. Show this safety data sheet to the doctor in attendance.
- If inhaled:** Remove to fresh air. Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.
- In case of skin contact:** Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. If on clothes, remove clothes.
- In case of eye contact:** Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing.
- If swallowed:** Keep respiratory tract clear. Rinse mouth with water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 DESCRIPTION OF FIREFIGHTING MEASURES

<b>Suitable extinguishing media:</b>	Foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical Water spray jet
<b>Unsuitable extinguishing media:</b>	High volume water jet
<b>Specific hazards during firefighting:</b>	Do not allow run-off from fire fighting to enter drains or water courses.
<b>Hazardous combustion products:</b>	Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide. Smoke. Silicon oxides.
<b>Specific extinguishing methods:</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Special protective equipment for firefighters:</b>	Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

<b>Personal precautions, protective equipment and emergency procedures:</b>	Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
<b>Environmental precautions:</b>	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.
<b>Methods and materials for containment and cleaning up:</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

## SECTION 7: HANDLING AND STORAGE

### 7.1 PRECAUTIONS FOR SAFE HANDLING AND STORAGE

<b>Advice on safe handling:</b>	Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Do not breathe vapors or spray mist. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Always replace cap after use.
<b>Conditions for safe storage:</b>	BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects. No smoking. Observe label precautions. Keep in a dry, cool, well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.
<b>Materials to avoid:</b>	Oxidizing agents.



## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 CONTROL PARAMETERS

- AIRBORNE EXPOSURE LIMITS:**

COMPONENT	ACGIH TLV	OSHA PEL	NIOSH REL	OTHER
Propane	Minimal Oxygen Content (19.5% at Sea Level)	TWA = 1000 ppm	TWA = 1000 ppm	NE

### 8.2 EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Respiratory protection:</b>	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
<b>Hand protection:</b>	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
<b>Eye protection:</b>	Safety glasses Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Skin and body protection:</b>	Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
<b>Hygiene measures:</b>	Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Aerosol containing a liquefied gas.
<b>Color:</b>	No data available.
<b>Odor:</b>	No data available.
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	8.0-9.0.
<b>Melting point/freezing point:</b>	No data available.
<b>Boiling point:</b>	No data available.
<b>Flash point:</b>	Not applicable.
<b>Evaporation rate:</b>	Not determined.
<b>Flammability (solid, gas):</b>	Non-flammable aerosol.
<b>Upper explosion limit:</b>	No data available.
<b>Lower explosion limit:</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Relative vapor density:</b>	No data available.
<b>Density:</b>	0.95g/cm <sup>3</sup> .
<b>Solubility(ies)/Water solubility:</b>	Partly soluble.
<b>Solubility in other solvents:</b>	Not determined.
<b>Partition coefficient: n-octanol/water:</b>	No data available.
<b>Auto-ignition temperature:</b>	No determined.
<b>Thermal decomposition:</b>	No data available.
<b>Viscosity - Viscosity, kinematic:</b>	No data available.
<b>Heat of combustion:</b>	No data available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 REACTIVITY, STABILITY, AND CONDITIONS TO AVOID

<b>Reactivity:</b>	Stable.
<b>Chemical stability:</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Vapors may form explosive mixture with air. No decomposition if stored and applied as directed.
<b>Conditions to avoid:</b>	Heat, flames and sparks. Extremes of temperature and direct sunlight.
<b>Incompatible materials:</b>	Strong oxidizing agents.
<b>Hazardous decomposition products:</b>	Carbon monoxide, carbon dioxide.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 INFORMATION ON ACUTE EFFECTS

#### COMPONENTS

##### Propane

Acute inhalation toxicity	LC50 mouse: 1,237 mg/l Exposure time: 2 h LC50 rat: 658 mg/l Exposure time: 4 h LC50 rat: 1,355 mg/l
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### 11.2 INFORMATION ON OTHER HEALTH EFFECTS

#### PRODUCT

<b>Skin corrosion/Irritation:</b>	Remarks: Slight irritation.
<b>Serious eye damage/eye irritation:</b>	Remarks: May irritate the eyes.
<b>Respiratory or skin sensitization:</b>	No data available.

#### COMPONENTS

<b>Germ cell mutagenicity:</b>	No data available.
<b>Carcinogenicity:</b>	No data available.
<b>Reproductive toxicity:</b>	No data available.
<b>STOT - single exposure:</b>	No data available.
<b>STOT - repeated exposure:</b>	No data available.
<b>Aspiration toxicity:</b>	No data available.

<b><u>FURTHER INFORMATION</u></b>	No data available.
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## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 TOXICITY INFORMATION

<b>Ecotoxicity:</b>	No data available.	
<b>Persistence and degradability:</b>	No data available.	
<b>Bioaccumulative potential – PRODUCT:</b>	Partition coefficient: n-octanol/water	No data available.
<b>Bioaccumulative potential – PROPANE:</b>	Partition coefficient: n-octanol/water	No data available.
<b>Mobility in soil:</b>	No data available.	
<b>Other adverse effects:</b>	No data available.	

### 12.2 OTHER PRODUCT INFORMATION

<b>REGULATION:</b>	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
<b>Remarks :</b>	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
<b>Additional ecological information:</b>	No data available.

## SECTION 13: DISPOSAL CONSIDERATION

### 13.1 WASTE TREATMENT METHODS

- Dispose of in accordance with local, State and Federal regulations.
- Dispose of unused product properly. Do not re-use empty containers.

### 13.2 DISPOSAL CONSIDERATIONS

- **EPA RCRA WASTE CODE:** Not applicable.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 DANGEROUS GOODS BASIC DESCRIPTION AND OTHER TRANSPORT INFORMATION

- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

ORM-D, CONSUMER COMMODITY

- **CANADIAN TRANSPORTATION INFORMATION:** This product is regulated by Transport Canada as dangerous goods under Canadian transportation standards. Use the following information:

UN 1950, Aerosols, Non-Flammable, 2.2(Limited Quantity)

- **IATA DESIGNATION:** This product is regulated as dangerous goods by the International Air Transport Association. Use the following information:

UN 1950, Aerosols, Non-Flammable, 2.2(Limited Quantity)

- **IMDG DESIGNATION:** This product is regulated as dangerous goods by the International Maritime Organization. Use the following information:

UN 1950, Aerosols, Non-Flammable, 2.2(Limited Quantity)

## SECTION 15: REGULATORY INFORMATION

### 15.1 UNITED STATES REGULATIONS

- **EPCRA - Emergency Planning and Community Right-to-Know Act**
- **CERCLA Reportable Quantity:** This material does not contain any components with a CERCLA RQ.
- **SARA 304 Extremely Hazardous Substances Reportable Quantity:** This material does not contain any components with a section 304 EHS RQ.
- **Other Important Regulations:**
  - SARA 311/312 Hazards:** Sudden Release of Pressure Hazard
  - SARA 302:** SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
  - SARA 313:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
- California Prop 65:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### 15.2 OTHER REGULATIONS

<b>TSCA</b>	On TSCA Inventory.
<b>DSL</b>	This product contains one or several components that are not on the Canadian DSL nor NDSL.
<b>AICS</b>	Not in compliance with the inventory.
<b>NZIoC</b>	Not in compliance with the inventory.
<b>PICCS</b>	Not in compliance with the inventory.
<b>IECSC</b>	Not in compliance with the inventory.

#### Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## SECTION 16: OTHER INFORMATION

### 16.1 INDICATION OF CHANGE

- **DATE OF REVISION:** December 10, 2015
- **SUPERCEDES:** April 29, 2015
- **CHANGE INDICATED:** Format alterations.

### 16.2 KEY LITERATURE REFERENCES AND SOURCES FOR DATA

- SAFETY DATA SHEET FOR MANUFACTURER PRODUCT.

### 16.3 HAZARDOUS MATERIALS CLASSIFICATION SYSTEM

<b>Health</b>	1	
<b>Flammability</b>	2	
<b>Physical Hazard</b>	2	
<b>Protective Equipment</b>	B	<u>HMIS Personal Protective Equipment Rating:</u> Occupational Use situations: B - Safety glasses and gloves.

### 16.4 PERSONAL PROTECTION SYMBOLS

Hand Protection



Eye Protection



## SECTION 16: OTHER INFORMATION (Continued)

### 16.5 NFPA INFORMATION

#### NFPA Rating



#### NFPA Classification

Non-Flammable Aerosol

### 16.6 DISCLAIMER

WAXIE Sanitary Supply makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of their own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by WAXIE Sanitary Supply as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does WAXIE Sanitary Supply assume any liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. WAXIE Sanitary Supply does not recommend blending this product with any other chemicals. All information, recommendations and data contained herein concerning this product are based upon information available at the time of writing from recognized technical sources.

### 16.7 ABBREVIATIONS AND ACRONYMS

**ALL SECTIONS:** OSHA: U.S. Federal Occupational Safety and Health Administration. WHMIS: Canadian Workplace Hazardous Materials Standard. GHS: Globally Harmonized System of Classification of Chemical Substances. REACH: European Union regulation, Registration, Evaluation, Authorization and Restriction of Chemical substances.

**SECTION 2:** CAS Number: Chemical Abstract Service Number, which is used by the American chemical Society to uniquely identify a chemical.

**SECTION 5:** NFPA: National Fire Protection Association. NFPA FLAMMABILITY CLASSIFICATION: The NFPA uses the flash point (F.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.P. below 73°F and BP below 100°F. Class IB: F.P. below 73°F and BP at or above 100°F. Class IC: F.P. at or above 73°F and BP at or above 100°F. Class II: F.P. at or above 100°F and below 140°F. Class IIIA: F.P. at or above 140°F and below 200°F. Class IIIB: F.P. at or above 200°F. NFPA HAZARDOUS MATERIALS RATING: This is a rating system used to summarize physical and health hazards to firefighters. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

**SECTION 8:** NE: Not established. ACGIH: American Conference of Government Industrial Hygienists; TWA: Time-Weighted Average (over an 8-hour work day); STEL: Short-Term Exposure Limit (15 minute average, no more than 4-times daily and each exposure separated by one-hour minimally); C: Ceiling Limit (concentration not to be exceeded in a work environment). PEL: Permissible Exposure Limit. NIOSH: National Institute of Occupational Safety and Health; REL: Recommended Exposure Limit; IDLH: Immediately Dangerous to Life and Health Concentrations. *Note*: In July 1992, a court ruling vacated the more protective PELs set by OSHA in 1989. Because OSHA may enforce the more protective levels under the "general duty clause", both the current and vacated levels are presented in this document. ppm: Parts per Million. mg/m<sup>3</sup>: Milligrams per cubic meter. mppt: Millions of Particles per Cubic Foot. BEI: Biological Exposure Limit. EL: Exposure Limit (United Kingdom). Federal Republic of Germany (DFG) Maximum Concentration Values in the Workplace (MAKs)

**SECTION 9:** pH: Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, pH of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. FLASH POINT: Temperature at which a liquid generates enough flammable vapors so that ignition may occur. AUTOIGNITION TEMPERATURE: Temperature at which spontaneous ignition occurs.

**SECTION 9 (Continued):** LOWER EXPLOSIVE LIMIT (LEL): The minimal concentration of flammable vapors in air which will sustain ignition. UPPER EXPLOSIVE LIMIT (UEL): The maximum concentration of flammable vapors in air which will sustain ignition. ≈: Approximately symbol. VOC: Volatile Organic Compound.

**SECTION 11:** CARCINOGENICITY STATUS: NTP: National Toxicology Program. IARC: International Agency for Research on Cancer. REPRODUCTIVE TOXICITY INFORMATION: Mutagen: Substance capable of causing chromosomal damage to cells. Embryotoxin: Substance capable of damaging the developing embryo in an overexposed female. Teratogen: Substance capable of damaging the developing fetus in an overexposed female. Reproductive toxin: Substance capable of adversely affecting male or female reproductive organs or functions. TOXICOLOGY DATA: LD<sub>50</sub> or LC<sub>50</sub>: The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designate route of administration. This value is used to access the toxicity of chemical substances to humans. TD<sub>50</sub> or TC<sub>50</sub>: The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designate route of administration.

**SECTION 12:** EC50: Effect Concentration (on 50% of study group); BOD: Biological Oxygen Demand. N/LOEC: No/Lowest Observable Effect Concentration.

**SECTION 13:** RCRA: Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. EPA RCRA Waste Codes: Defined in 40 CFR Section 261.

**SECTION 15:** CERCLA: Comprehensive Environmental Response Compensation and Liability Act (a.k.a. "Superfund") and SARA: (Superfund Amendment and Reauthorization Act). The regulations promulgated under this Act are located under 40 CFR 300 ff. and provide "community right-to-know" requirements. TSCA: Toxic Substances Control Act: Rules regulating the manufacture and sale of chemicals found in 40 CFR 700-766. DSL/NDSL: Canadian Domestic Substances and Non-Domestic Substances Lists.

**SECTION 16:** HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING: This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

# Safety Data Sheet

acc. to OSHA HCS

Printing date 11/14/2013

Revised On 11/14/2013

## 1 Identification of the substance and manufacturer

**Trade name:** WHITE INVERTED TIP MARKER

**Product code:** UT00160652  
**Manufacturer/Supplier:** Seymour of Sycamore  
 917 Crosby Avenue  
 Sycamore, IL 60178  
 Phone: 815-895-9101  
 www.seymourpaint.com



**General Information:** Health & Safety Department

## 2 Composition/information on ingredients

**Chemical Description:** This product is a mixture of the substances listed below with nonhazardous additions.

### Dangerous components:

74-98-6	propane	17.63%
64742-89-8	VM&P Naphtha	14.96%
1317-65-3	Calcium Carbonate	14.79%
106-97-8	n-butane	10.36%
13463-67-7	titanium dioxide	6.11%
64742-47-8	Mineral Spirits	5.17%

## 3 Hazard(s) identification

### Hazard Information for people and the environment:

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.  
 Extremely flammable liquid and vapor in a pressurized container. Keep away from heat, sparks, and flame.

Has narcotizing effect.

### Risk phrases:

Extremely flammable.  
 Irritating to respiratory system and skin.

### Safety phrases:

Keep locked up and out of the reach of children.  
 Keep away from sources of ignition - No smoking.  
 Do not breathe gas/fumes/vapour/spray.  
 Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point  
 If swallowed, seek medical advice immediately and show this container or label.

### Effects of chronic overexposure:

May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be harmful or fatal.

### NFPA ratings (0 - 4):

Health- 1  
 Fire- 3  
 Reactivity- 3

### HMS-ratings (0 - 4):

Health- 1  
 Flammability- 3  
 Physical Hazard-3

## 4 First-aid measures

**After inhalation:** Supply fresh air; consult doctor in case of complaints.  
**After skin contact:** Remove contaminated clothing. Wash exposed area with soap and water.  
**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.  
**After swallowing:** Contact physician or poison control center.

## 5 Fire-fighting measures

**Extinguishing agents:** CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.  
**Special hazards:** No further relevant information available.  
**Protective equipment:** No special measures required.

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Wear protective equipment. Keep unprotected persons away.  
**Environmental precautions:** Do not allow product to reach sewage systems or ground water.

(Contd. on page 2)  
 USA

**Safety Data Sheet**  
acc. to OSHA HCS

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Trade name: WHITE INVERTED TIP MARKER

(Contd. of page 1)

**Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

**7 Handling and storage****Fire/explosion protection:** Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic discharges.**Storage requirements:** Observe pressurized container storage regulations. Consult with your local authorities.**8 Exposure controls/personal protection****Components with limit values that require monitoring at the workplace:****74-98-6 propane**PEL Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppmREL Long-term value: 1800 mg/m<sup>3</sup>, 1000 ppm

TLV refer to Appendix F: minimal oxygen content

**106-97-8 n-butane**REL Long-term value: 1900 mg/m<sup>3</sup>, 800 ppmTLV Short-term value: 2370 mg/m<sup>3</sup>, 1000 ppm**Hygienic protection:**

Keep away from foodstuffs and animal feed. Wash hands after use.

**Breathing equipment:**

A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. If you suspect overexposure conditions exist, please consult an authority on chemical hygiene.

**Hand protection:**

Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove recommendation can be given.

**Eye protection:**

Tightly sealed goggles

**9 Physical and chemical properties****pH-value:** Not determined.**Boiling point:** -44 °C (-47 °F)**Flash point:** -19 °C (-2 °F)**Flammability (solid, gaseous):** Not applicable.**Auto igniting:** Product is not self-igniting.**Danger of explosion:** Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit.  
In use, may form flammable/explosive vapour-air mixture.**Lower Explosion Limit:** 1.5 Vol %**Upper Explosion Limit:** 10.9 Vol %**Vapor Pressure:** 40 PSI, 2750 hPa**Specific Gravity:** Between 0.77 and 0.85 (Water equals 1.00)**VOC content:** 516.6 g/l / 4.31 lb/gl**VOC content (less exempt solvents):** 48.7 %**Water:** 22.0 %**MIR Value:** 0.54**Solids content:** 28.2 %**Other information** No further relevant information available.**10 Stability and reactivity****Conditions to avoid:** Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.**Hazardous decomposition:**

No dangerous decomposition products known.

**11 Toxicological information****Skin effects:** No irritant effect.**Eye effects:** No irritating effect.**Sensitization:** No sensitizing effects known.**Additional toxicological information:****Carcinogenic categories****IARC (International Agency for Research on Cancer)**

13463-67-7 titanium dioxide

2B

(Contd. on page 3)  
USA

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 11/14/2013

Revised On 11/14/2013

**Trade name: WHITE INVERTED TIP MARKER**

(Contd. of page 2)

**NTP (National Toxicology Program)**

None of the ingredients is listed.

**12 Ecological information**

**Aquatic toxicity:** Hazardous for water, do not empty into drains.  
**Other information:** This product does not contain any chlorofluorocarbons (CFC's), hydrochlorofluorocarbons (HCFC's), perfluorocarbons (PFC's), or chlorinated solvents.

**13 Disposal considerations**

Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.  
**Recommendation:** Completely empty cans should be recycled.

**14 Transport information**

**UN-Number** UN1950  
**DOT** Consumer Commodity ORM-D  
 Aerosols, flammable  
**Class** 2.1  
**Marine pollutant:** No  
**EMS Number:** F-D,S-U  
**Packaging Group:** --

**15 Regulatory information**

**SARA Section 355 (extremely hazardous substances):**

None of the ingredients in this product are listed.

**SARA Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

**TSCA:** All ingredients are listed.

**CPSC:** This product complies with 16 CFR 1303 and does not contain more than 90 ppm of lead.

**California Proposition 65 chemicals known to cause cancer:**

100-41-4 ethyl benzene

**WHMIS Symbols for Canada:**

A - Compressed gas



**EPA:**

None of the ingredients is listed.

**ACGIH:**

13463-67-7 titanium dioxide

A4

**NIOSH:**

13463-67-7 titanium dioxide

**16 Other information**

This product was manufactured in the U.S.A.  
 The information on this sheet is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Contact:** Regulatory Affairs

**Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 NFPA: National Fire Protection Association (USA)  
 HMIS: Hazardous Materials Identification System (USA)  
 VOC: Volatile Organic Compounds (USA, EU)  
 ISO: International Organization for Standardization  
 EPA: Environmental Protection Agency  
 IARC: International Agency for the Research of Cancer  
 NIOSH: National Institute for Occupational Safety and Health  
 TSCA: Toxic Substances Control Act  
 CPSC: Consumer Product Safety Commission

USA





Revision Date 08-Feb-2005

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product code** 95789  
**Product name** White Inverted Tip Marking Paint  
**Recommended Use** Coating  
**Supplier** Lawson Products, Inc.  
1666 East Touhy Avenue  
Des Plaines, IL 60018  
(847)-827-9666  
**Emergency telephone number** (888) 426-4851

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

Irritant. Extremely flammable.

**Color** White

**Odor** Solvent

**Form** Aerosol

**Aggravated Medical Conditions** Reports have associated prolonged overexposure to solvents with permanent brain and nervous system damage.

**Principal Routes of Exposure** Eyes. Inhalation.

### Potential health effects

**Eyes** Irritation. Swelling.

**Skin** Skin Irritation.

**Inhalation** May cause irritation of the nose and throat. Central nervous system effects. Dizziness. Headaches. Fatigue. Exposure to hot fumes may cause nausea and damage to respiratory system. Misuse by deliberately concentrating vapors and inhaling contents can be harmful or fatal.

**Ingestion** No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Propane	74-98-6	10-30
Calcium Carbonate	1317-65-3	10-30
N-Butane	106-97-8	5-10
Light Aliphatic Naptha Solvent	64742-89-8	10-30
Titanium Dioxide	13463-67-7	5-10
Toluene	108-88-3	1-5
Xylene (mix)	1330-20-7	1-5
Hexane	110-54-3	1-5
Mineral Spirits	64742-47-8	1-5
Ethyl benzene	100-41-4	1-5

#### 4. FIRST AID MEASURES

<b>Eye contact</b>	Remove to fresh air. Rinse thoroughly with plenty of water, also under the eyelids. Seek medical attention if irritation persists.
<b>Skin contact</b>	Wash area thoroughly with soap and water. Remove and wash contaminated clothing before re-use.
<b>Ingestion</b>	Call a physician or Poison Control Center immediately.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.

#### 5. FIRE FIGHTING MEASURES

<b>Flash point °C</b>	-19
<b>Flash point °F</b>	-2
<b>Method</b>	No information available

<b>Autoignition temperature °C</b>	No data available
<b>Autoignition temperature °F</b>	

<b>Flammability Limits (% in Air)</b>	
<b>Upper</b>	10.9
<b>Lower</b>	0.9

##### Specific Information for Aerosol Products

<b>Flame extension</b>	15"
<b>Flashback</b>	None

##### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>). Water spray. alcohol-resistant foam. Sand.

##### Extinguishing media which must NOT be used for safety reasons

No information available.

##### Special Fire-Fighting Procedures

None known.

##### Fire and Explosion Hazards

Firefighters should wear NIOSH/MSHA approved (or equivalent) self-contained pressure-demand breathing apparatus and full protective clothing.

**Sensitivity to shock**

No information available.

**Sensitivity to static discharge**

No information available.

## 6. ACCIDENTAL RELEASE MEASURES

**Methods for cleaning up**

Personnel should wear appropriate protective equipment. Follow all precautions for handling. Please refer to appropriate sections of MSDS for additional information. Evacuate area of unprotected and unnecessary personnel. Do not allow product to reach sewage system, soil, surface or ground water, or any water course. Notify proper authorities if entry occurs. Do not flush with water or aqueous cleansing agents. Use diluted caustic solution. Soak up with inert absorbent material. Dispose of absorbent in accordance with local, state and federal regulations.

## 7. HANDLING AND STORAGE

**Handling**

Protect against electrostatic charges. Do not smoke.

**Storage**

Small pressurized containers of flammable product may be stored in areas suitable for ordinary combustibles with respect to construction, drainage, control of ignition sources, and ventilation except that they should not be stored in basements. Keep away from heat. Keep away from direct sunlight. Do not freeze.

**NFPA Storage Code**

Store as Level 3 Aerosol (NFPA 30B)

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure limits**

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Propane	1000 ppm 1800 mg/m <sup>3</sup>	-	1000 ppm listed under aliphatic hydrocarbon gases alkane C1-C4	-
Calcium Carbonate	15 mg/m <sup>3</sup> total dust 5 mg/m <sup>3</sup> respirable fraction	-	-	-
N-Butane	-	-	1000 ppm listed under aliphatic hydrocarbon gases alkane C1-C4	-
Light Aliphatic Naptha Solvent	-	-	-	-
Titanium Dioxide	15 mg/m <sup>3</sup> total dust	-	10 mg/m <sup>3</sup>	-
Toluene	200 ppm	300 ppm	50 ppm	-
Xylene (mix)	100 ppm 435 mg/m <sup>3</sup>	-	100 ppm	150 ppm
Hexane	1800 mg/m <sup>3</sup> 500 ppm	-	50 ppm 500 ppm	N/D
Mineral Spirits	-	-	-	-
Ethyl benzene	100 ppm 435 mg/m <sup>3</sup>	-	100 ppm	125 ppm

**Ventilation and Environmental Controls**

Adequate ventilation should be provided to keep exposure levels below current acceptable exposure limits.

**Hygiene measures**

Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product.

**Personal protective equipment****Respiratory protection**

None necessary under normal conditions. Use NIOSH approved respirator if TLV limit is exceeded.

**Hand protection**

Protective gloves. Impervious gloves.

**Eye protection**

Tightly fitting safety goggles.

**Skin and body protection**

No information available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form</b>	Aerosol	<b>Color</b>	White
<b>Odor</b>	Solvent	<b>Odor Threshold</b>	5 ppm
<b>pH</b>	No data available	<b>Specific Gravity</b>	0.77-0.90
<b>Vapor pressure</b>	No data available	<b>Vapor density</b>	No data available
<b>Evaporation Rate</b>	No data available	<b>VOC Content</b>	50.0 %
<b>Water solubility</b>	No data available	<b>Partition Coefficient (n-octanol/water)</b>	>1
 		<b>Boiling point/range °C</b>	-44
<b>Boiling point/range °F</b>	-47	<b>Melting point/range °C</b>	No data available
<b>Melting point/range °F</b>	No data available	<b>Flash point °C</b>	-19
<b>Flash point °F</b>	-2		

## 10. STABILITY AND REACTIVITY

**Stability**

Stable under normal conditions.

**Conditions to avoid**

Do not store in temperatures above 120 degrees F.

**Materials to avoid**

No information available

**Hazardous decomposition products**

None known.

**Polymerization**

No information available

**Synergistic Products**

No information available.

**11. TOXICOLOGICAL INFORMATION****Component Information**

<b>Chemical Name</b>	<b>LD50 (oral, rat)</b>	<b>LD50 (dermal, rat/rabbit)</b>	<b>LC50 (inhalation, rat)</b>
<i>Propane</i> 74-98-6	-	-	-
<i>Calcium Carbonate</i> 1317-65-3	-	-	-
<i>N-Butane</i> 106-97-8	-	-	658 g/m <sup>3</sup> 680 g/m <sup>3</sup>
<i>Light Aliphatic Naptha Solvent</i> 64742-89-8	-	-	-
<i>Titanium Dioxide</i> 13463-67-7	-	-	-
<i>Toluene</i> 108-88-3	636 mg/kg	14100 µL/kg	400 mg/kg 49 g/m <sup>3</sup>
<i>Xylene (mix)</i> 1330-20-7	4300 mg/kg	1700 mg/kg	5000 ppm
<i>Hexane</i> 110-54-3	28710 mg/kg	-	48000 ppm
<i>Mineral Spirits</i> 64742-47-8	-	-	-
<i>Ethyl benzene</i> 100-41-4	3500 mg/kg	17800 µL/kg	-

**Potential health effects****Sensitization**

No information available.

**Mutagenic effects**

No information available.

**Reproductive toxicity**

No information available

**Carcinogenic effects**

See table below

**Chronic toxicity**

No information available.

**Teratogenic effects**

No information available

**Target Organ Effects**

No information available

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Propane	-	-	-	-	-
Calcium Carbonate	-	-	-	-	-
N-Butane	-	-	-	-	-
Light Aliphatic Naptha Solvent	-	-	-	-	-
Titanium Dioxide	A4 - Not Classifiable as a Human Carcinogen	-	-	-	-
Toluene	A4 - Not Classifiable as a Human Carcinogen	-	-	-	-
Xylene (mix)	A4 - Not Classifiable as a Human Carcinogen	-	-	-	-
Hexane	-	-	-	-	-
Mineral Spirits	-	-	-	-	-
Ethyl benzene	A3 - Confirmed animal carcinogen with unknown relevance to humans	Group 2B	-	-	Listed

## 12. ECOLOGICAL INFORMATION

### Aquatic toxicity

Toluene

**Microtox Data**

*Photobacterium phosphoreum* EC50=19.7 mg/L (30 min)

**Water Flea Data**

water flea EC50=11.3 mg/L (48 h)

water flea EC50=310 mg/L (48 h)

Xylene (mix)

**Microtox Data**

*Photobacterium phosphoreum* EC50=0.0084 mg/L (24 h)

**Water Flea Data**

water flea EC50=3.82 mg/L (48 h)

Hexane

**Water Flea Data**

water flea LC50=3.87 mg/L (48 h)

Ethyl benzene

**Microtox Data**

*Photobacterium phosphoreum* EC50=9.68 mg/L (30 min)

**Water Flea Data**

water flea EC50=2.1 mg/L (48 h)

### 13. DISPOSAL CONSIDERATIONS

#### **Waste from residues / unused products**

Dispose in accordance with federal, state, and local regulations. Do not puncture or incinerate. Please recycle empty container whenever possible.

### 14. TRANSPORT INFORMATION

#### **DOT**

Consumer commodity (Toluene,Xylenes (isomers and mixture)),ORM-D,,RQ

#### **TDG**

AEROSOLS(Propane,N-Butane), Class 2.1,UN1950,PG

#### **IMDG/IMO**

Aerosols(Propane,N-Butane),UN1950,PG

#### **IATA**

Aerosols, flammable(Propane,N-Butane),UN1950  
Hazard Class 2.1

#### **MEX**

UN1950 Aerosols(Propane,N-Butane),2.2,

### 15. REGULATORY INFORMATION

Chemical Name	US EPA SARA 313 Emission Reporting
Toluene	Listed
Xylene (mix)	Listed
Hexane	Listed
Ethyl benzene	Listed

#### **State Regulations**

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Propane	Listed	Listed	Not Listed
Calcium Carbonate	Not Listed	Listed	Not Listed
N-Butane	Not Listed	Listed	Not Listed
Light Aliphatic Naptha Solvent	Not Listed	Not Listed	Not Listed
Titanium Dioxide	Not Listed	Listed	Not Listed
Toluene	Listed	Listed	Developmental
Xylene (mix)	Not Listed	Listed	Not Listed
Hexane	Listed	Listed	Not Listed
Mineral Spirits	Not Listed	Not Listed	Not Listed
Ethyl benzene	Listed	Listed	Carcinogen

### International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA
Propane	X	X	-	X
Calcium Carbonate	X	-	X	X
N-Butane	X	X	-	X
Light Aliphatic Naptha Solvent	X	X	-	X
Titanium Dioxide	X	X	-	X
	X			
	X			
Toluene	X	X	-	X
Xylene (mix)	X	X	-	X
Hexane	X	X	-	X
Mineral Spirits	X	X	-	X
Ethyl benzene	X	X	-	X

### CPRC

This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations

## 16. OTHER INFORMATION

NFPA		HMIS	
Health	1	Health	1
Flammability	3	Flammability	3
Reactivity	3	Physical Hazard	3

### Reason for revision

No information available.

### Prepared By

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The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.