

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** SAFETY-KLEEN USED ANTIFREEZE

**Product Code:** Prefix 09

**Synonyms:** 1,2-Ethenediol; 1,2-Ethylene glycol; 2-Hydroxyethanol; Ethylene alcohol

**SDS No.:** 82912

#### 1.2. Intended Use of the Product

Used automotive coolant.

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

##### MANUFACTURER/SUPPLIER

Safety-Kleen Systems, Inc.

42 Longwater Drive

Norwell, MA 02061-9149

U.S.A.

1-800-669-5740

[www.safety-kleen.com](http://www.safety-kleen.com)

##### IMPORTER/DISTRIBUTOR

Safety-Kleen Canada, Inc.

25 Regan Road

Brampton, Ontario, L7A 1B2

Canada

1-800-669-5740

[www.safety-kleen.com](http://www.safety-kleen.com)

#### 1.4. Emergency Telephone Number

**Emergency Number** : 1-800-468-1760

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### GHS-US/CA Classification

Acute toxicity (oral) Category 4

H302

Specific target organ toxicity (repeated exposure) Category 2

H373

#### 2.2. Label Elements

##### GHS-US/CA Labeling

**Hazard Pictograms (GHS-US/CA)** :



**Signal Word (GHS-US/CA)** :

Warning

**Hazard Statements (GHS-US/CA)** :

H302 - Harmful if swallowed.

H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

**Precautionary Statements (GHS-US/CA)** :

P260 - Do not breathe vapors, mist, or spray.

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

P270 - Do not eat, drink or smoke when using this product.

P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

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

P330 - Rinse mouth.

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

#### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

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

No additional information available

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Ethylene glycol	1,2-Dihydroxyethane / Ethane-1,2-diol / 1,2-Ethanediol / Ethanediol / GLYCOL	(CAS-No.) 107-21-1	2 – 68	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
1,2-Propanediol	1,2-Propylene glycol / 1,2-Dihydroxypropane / Propane-1,2-diol / Propylene glycol / PROPYLENE GLYCOL	(CAS-No.) 57-55-6	4 – 44	Not classified
Diethylene glycol	Bis(2-hydroxyethyl) ether / DEG / Diglycol / Dihydroxydiethyl ether / 2,2'-Dihydroxyethyl ether	(CAS-No.) 111-46-6	1 – 2	Acute Tox. 4 (Oral), H302 STOT RE 2, H373

Full text of H-statements: see section 16

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

### SECTION 4: FIRST AID MEASURES

#### 4.1. Description of 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).

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

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

#### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** Harmful if swallowed. May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

**Inhalation:** Prolonged exposure may cause irritation.

**Skin Contact:** Prolonged exposure may cause skin irritation.

**Eye Contact:** May cause slight irritation to eyes.

**Ingestion:** This material is harmful orally and can cause adverse health effects or death in significant amounts. Acute exposure of humans to ethylene glycol by ingesting large quantities causes three stages of health effects. CNS depression, including such symptoms as vomiting, drowsiness, coma, respiratory failure, convulsions, metabolic changes, and gastrointestinal upset are followed by cardiopulmonary effects and later renal damage.

**Chronic Symptoms:** May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

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

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Water spray, fog, carbon dioxide (CO<sub>2</sub>), alcohol-resistant foam, or dry chemical.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

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

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**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:** Use water spray or fog for cooling exposed containers.

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

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**Hazardous Combustion Products:** Carbon oxides (CO, CO<sub>2</sub>). Unidentified organic compounds.

### 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

**General Measures:** Do not get in eyes, on skin, or on clothing. Avoid breathing (vapor, mist, spray).

#### 6.1.1. For Non-Emergency Personnel

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

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

**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. Ventilate area.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Materials 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. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Spilled material may present a slipping hazard.

**Precautions for Safe Handling:** Do not get in eyes, on skin, or on clothing. Avoid breathing vapors, mist, spray. Handle empty containers with care because they may still present a hazard. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

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

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Reactive metals.

### 7.3. Specific End Use(s)

Used automotive coolant.

## 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), OSHA (PEL), or Canadian provincial governments.

Ethylene glycol (107-21-1)		
USA ACGIH	ACGIH OEL TWA [ppm]	25 ppm (vapor fraction)
USA ACGIH	ACGIH OEL STEL	10 mg/m <sup>3</sup> (inhalable particulate matter, aerosol only)
USA ACGIH	ACGIH OEL STEL [ppm]	50 ppm (vapor fraction)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
Alberta	OEL C	100 mg/m <sup>3</sup>
British Columbia	OEL C	100 mg/m <sup>3</sup> (aerosol)
British Columbia	OEL Ceiling [ppm]	50 ppm (vapour)
British Columbia	OEL STEL	20 mg/m <sup>3</sup> (particulate)
British Columbia	OEL TWA	10 mg/m <sup>3</sup> (particulate)
Manitoba	OEL STEL	10 mg/m <sup>3</sup> (inhalable particulate matter, aerosol only)

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Manitoba	OEL STEL [ppm]	50 ppm (vapor fraction)
Manitoba	OEL TWA [ppm]	25 ppm (vapor fraction)
New Brunswick	OEL C	100 mg/m <sup>3</sup> (aerosol)
Newfoundland & Labrador	OEL STEL	10 mg/m <sup>3</sup> (inhalable particulate matter, aerosol only)
Newfoundland & Labrador	OEL STEL [ppm]	50 ppm (vapor fraction)
Newfoundland & Labrador	OEL TWA [ppm]	25 ppm (vapor fraction)
Nova Scotia	OEL STEL	10 mg/m <sup>3</sup> (inhalable particulate matter, aerosol only)
Nova Scotia	OEL STEL [ppm]	50 ppm (vapor fraction)
Nova Scotia	OEL TWA [ppm]	25 ppm (vapor fraction)
Nunavut	OEL C	100 mg/m <sup>3</sup> (aerosol)
Northwest Territories	OEL C	100 mg/m <sup>3</sup> (aerosol)
Ontario	OEL STEL	10 mg/m <sup>3</sup> (inhalable particulate matter, aerosol only)
Ontario	OEL STEL [ppm]	50 ppm (vapor fraction)
Ontario	OEL TWA [ppm]	25 ppm (vapor fraction)
Prince Edward Island	OEL STEL	10 mg/m <sup>3</sup> (inhalable particulate matter, aerosol only)
Prince Edward Island	OEL STEL [ppm]	50 ppm (vapor fraction)
Prince Edward Island	OEL TWA [ppm]	25 ppm (vapor fraction)
Québec	Plafond (OEL Ceiling)	127 mg/m <sup>3</sup> (mist and vapour)
Québec	Plafond (OEL Ceiling) [ppm]	50 ppm (mist and vapour)
Saskatchewan	OEL C	100 mg/m <sup>3</sup> (aerosol)
Yukon	OEL STEL	20 mg/m <sup>3</sup> (particulate) 325 mg/m <sup>3</sup> (vapour)
Yukon	OEL STEL [ppm]	10 ppm (particulate) 125 ppm (vapour)
Yukon	OEL TWA	10 mg/m <sup>3</sup> (particulate) 250 mg/m <sup>3</sup> (vapour)
Yukon	OEL TWA [ppm]	100 ppm (vapour)
<b>1,2-Propanediol (57-55-6)</b>		
USA AIHA	WEEL TWA	10 mg/m <sup>3</sup>
Ontario	OEL TWA	10 mg/m <sup>3</sup> (for assessing the visibility in a work environment where 1,2-Propylene glycol aerosol is present-aerosol only) 155 mg/m <sup>3</sup> (aerosol and vapor)
Ontario	OEL TWA [ppm]	50 ppm (aerosol and vapor)
<b>Diethylene glycol (111-46-6)</b>		
USA AIHA	WEEL TWA	10 mg/m <sup>3</sup>

## 8.2. Exposure Controls

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Gloves. Protective clothing. Safety glasses with side-shields.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear protective gloves.

**Eye and Face Protection:** Safety glasses with side-shields.

**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. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

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**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	: Green
Odor	: Sweet
Odor Threshold	: No data available
pH	: 6 – 10
Evaporation Rate	: No data available
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: > 148.9 °C (300 °F)
Flash Point	: > 93.3 °C (200 °F)
Auto-ignition Temperature	: 398 °C (748 °F) (Ethylene glycol)
Decomposition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: 3.2 % (Ethylene glycol)
Upper Flammable Limit	: 15.3 % (Ethylene glycol)
Vapor Pressure	: < 0.1 mm Hg @ 20° C (68 °F)
Relative Vapor Density at 20°C	: > 1 (Air = 1)
Relative Density	: > 1 (Water = 1)
Specific Gravity	: No data available
Solubility	: Water: Complete
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity	: No data 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.

### 10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, and incompatible materials.

### 10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers. Reactive metals.

### 10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Carbon oxides (CO, CO<sub>2</sub>). Unidentified organic compounds.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Harmful if swallowed.

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Not classified

#### LD50 and LC50 Data:

SAFETY-KLEEN USED ANTIFREEZE	
ATE US/CA (oral)	714.29 mg/kg body weight

**Skin Corrosion/Irritation:** Not classified

**pH:** 6 – 10

**Eye Damage/Irritation:** Not classified

**pH:** 6 – 10

**Respiratory or Skin Sensitization:** Not classified

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**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** Not classified

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

**Reproductive Toxicity:** Not classified

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

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes.

**Symptoms/Injuries After Ingestion:** This material is harmful orally and can cause adverse health effects or death in significant amounts. Acute exposure of humans to ethylene glycol by ingesting large quantities causes three stages of health effects. CNS depression, including such symptoms as vomiting, drowsiness, coma, respiratory failure, convulsions, metabolic changes, and gastrointestinal upset are followed by cardiopulmonary effects and later renal damage.

**Chronic Symptoms:** May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

### 11.2. Information on Toxicological Effects - Ingredient(s)

#### LD50 and LC50 Data:

<b>Ethylene glycol (107-21-1)</b>	
LD50 Oral Rat	4700 mg/kg
LD50 Dermal Rat	10600 mg/kg
LC50 Inhalation Rat	> 2.5 mg/l (Exposure time: 6 h)
<b>1,2-Propanediol (57-55-6)</b>	
LD50 Oral Rat	20 g/kg
LD50 Dermal Rabbit	20800 mg/kg
<b>Diethylene glycol (111-46-6)</b>	
LD50 Oral Rat	12565 mg/kg
LD50 Dermal Rabbit	11890 mg/kg
LC50 Inhalation Rat	> 4600 mg/m <sup>3</sup> (Exposure time: 4 h)

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General:** Not classified.

<b>Ethylene glycol (107-21-1)</b>	
LC50 Fish 1	41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 - Crustacea [1]	46300 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	14 – 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
<b>1,2-Propanediol (57-55-6)</b>	
LC50 Fish 1	51600 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 - Crustacea [1]	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	41 – 47 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
<b>Diethylene glycol (111-46-6)</b>	
LC50 Fish 1	75200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

### 12.2. Persistence and Degradability

<b>SAFETY-KLEEN USED ANTIFREEZE</b>	
<b>Persistence and Degradability</b>	Not established.

### 12.3. Bioaccumulative Potential

<b>SAFETY-KLEEN USED ANTIFREEZE</b>	
<b>Bioaccumulative Potential</b>	Not established.
<b>Ethylene glycol (107-21-1)</b>	

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Partition coefficient n-octanol/water (Log Pow)	-1.93
<b>1,2-Propanediol (57-55-6)</b>	
BCF Fish 1	< 1
<b>Diethylene glycol (111-46-6)</b>	
BCF Fish 1	100 – 180
Partition coefficient n-octanol/water (Log Pow)	-1.98 (at 25 °C)

### 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

**Waste Treatment Methods:** Consult supplier for specific recommendations.

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

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Ecology - Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

### 14.1. In Accordance with DOT

Not regulated for transport

### 14.2. In Accordance with IMDG

Not regulated for transport

### 14.3. In Accordance with IATA

Not regulated for transport

### 14.4. In Accordance with TDG

Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1. US Federal Regulations

<b>SAFETY-KLEEN USED ANTIFREEZE</b>		
SARA Section 311/312 Hazard Classes	Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Acute toxicity (any route of exposure)	
<b>Ethylene glycol (107-21-1)</b>		
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313		
CERCLA RQ	5000 lb	
SARA Section 313 - Emission Reporting	1 %	
<b>1,2-Propanediol (57-55-6)</b>		
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active		
<b>Diethylene glycol (111-46-6)</b>		
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active		
<b>Chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.</b>		
CAS-No.	Name	Percent by Weight
107-21-1	Ethylene glycol	2-68

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### 15.2. US State Regulations

#### California Proposition 65



**WARNING:** This product can expose you to Ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Ethylene glycol (107-21-1)		X		

#### Ethylene glycol (107-21-1)

U.S. - New Jersey - Right to Know Hazardous Substance List  
 U.S. - Pennsylvania - RTK (Right to Know) List  
 U.S. - Massachusetts - Right To Know List  
 U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

#### 1,2-Propanediol (57-55-6)

U.S. - New Jersey - Right to Know Hazardous Substance List  
 U.S. - Pennsylvania - RTK (Right to Know) List

#### Diethylene glycol (111-46-6)

U.S. - Pennsylvania - RTK (Right to Know) List

### 15.3. Canadian Regulations

#### Ethylene glycol (107-21-1)

Listed on the Canadian DSL (Domestic Substances List)

#### 1,2-Propanediol (57-55-6)

Listed on the Canadian DSL (Domestic Substances List)

#### Diethylene glycol (111-46-6)

Listed on the Canadian DSL (Domestic Substances List)

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

**Date of Preparation or Latest Revision** : 08/11/2022

**Indication of Changes** : Review of data. Language modified.

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

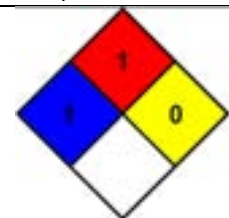
#### GHS Full Text Phrases:

H302	Harmful if swallowed
H373	May cause damage to organs through prolonged or repeated exposure

**NFPA Health Hazard** : 1 - Materials that, under emergency conditions, can cause significant irritation.

**NFPA Fire Hazard** : 1 - Materials that must be preheated before ignition can occur.

**NFPA Reactivity Hazard** : 0 - Material that in themselves are normally stable, even under fire conditions.



*The information contained herein is correct to the best of our knowledge, information, and belief and is designed only as guidance for the handling, use, processing, storage, transportation, disposal, and release of the product. User assumes all risks incident to use of this product and shall determine the quality and suitability of the product for its use. Supplier offers no warranty, express or implied, whatsoever, including warranties of merchantability or fitness for a particular purpose or otherwise, and specifically disclaims any and all liability for incidental, consequential, or other damages arising out the use or misuse of the product. The information provided relates only to the specific material provided and may not be valid if used in combination with any other materials or process, unless specified herein.*

NA GHS SDS 2015 (Can, US)



**SAFETY DATA SHEET**

**1. Product And Company Identification**

SDS ID: SDS 501  
 PRODUCT NAME: Prestone® Antifreeze/Coolant  
 PRODUCT NUMBER: AF2000BULK/F, AF2000/GF, AF2000/GFC, AF2000/GXF, AF2000/GXF-HT, AF2000L, AF2000LRU, AF2000PL, AF2000RU, AF2000UK, AF2000X, AF2000/X, AF2000-1KL, AF2000-1KL/GF, AF2050, AF2055, AF2055/GF, PRES04C, WMAF-CONC72/GF, WSS-M97B57-A1, YA-992-BLK/F, 65069, 71621, 71621/GF, 71621/GFC, 71621/GFC3, 72025

FORMULA NUMBER: YA956BY, YA956BY-B, YA956BY-ED, YA956BY-ED-B, YA-956BY-GLY, YA-992, YA-992-SC, YA-992-SC-2

MANUFACTURER:	CANADIAN OFFICE:	MEXICO OFFICE:
Prestone Products Corporation 69 Eagle Rd. Danbury, CT 06810	Prestone Canada 33 MacIntosh Blvd. Concord, ON L4K 4L5	ASG Operations Mexico S. de R.L. de C.V. Carretera Mexico Cuautitlan, Kilometro 31.5, Nave Industrial 5, Loma Bonita, Cuautitlan, Mexico, 54800

MEDICAL EMERGENCIES AND ALL OTHER INFORMATION PHONE NUMBER:

(888)269-0750 (in the US and Canada)  
 01-800-715-4135 (in Mexico)

TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only):

CHEMTREC 1-800-424-9300 (in the US and Canada) +1 703 741-5970 (outside the US and Canada)

PRODUCT USE: Automobile Antifreeze – consumer product

RESTRICTIONS ON USE: None identified

**2. Hazards Identification**

**GHS/HAZCOM 2012 Classification:**

Health	Physical
Acute Toxicity Category 4 Specific Target Organ Toxicity – Repeated Exposure Category 2 Toxic to Reproduction Category 2	Not Hazardous

Label Elements

**WARNING!**  
 H302 Harmful if swallowed.  
 H361d Suspected of damaging the unborn child.  
 H373 May cause damage to kidneys through prolonged or repeated exposure.

**Prevention:**  
 P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P260 Do not breathe mist or vapors.



P264 Wash exposed skin thoroughly after handling.  
P270 Do not eat, drink, or smoke when using this product.  
P281 Use personal protective equipment as required.

**Response:**

P301 + P312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.  
P330 Rinse mouth.  
P308 + P313 IF exposed or concerned: Get medical attention.

**Storage and Disposal:**

P405 Store locked up.  
P501 Dispose of contents and container in accordance with local and national regulations.

### 3. Composition/Information on Ingredients

Component	CAS No.	Percent w/w
Ethylene Glycol	107-21-1	80-100
2-Ethyl Hexanoic Acid, Sodium Salt	19766-89-3	1-5
Neodecanoic Acid, Sodium Salt	31548-27-3	1-5
Diethylene Glycol	111-46-6	0-5

The exact concentrations are a trade secret.

### 4. First Aid Measures

**INHALATION:** Remove the victim to fresh air. If breathing has stopped administer artificial respiration. If breathing is difficult, have medical personnel administer oxygen. Get medical attention.

**SKIN CONTACT:** Remove contaminated clothing. Immediately wash contacted area thoroughly with soap and water. If irritation persists, get medical attention.

**EYE CONTACT:** Immediately flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

**INGESTION:** Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person.

**MOST IMPORTANT SYMPTOMS:** May cause eye irritation. Inhalation of mists may cause nose and throat irritation and nervous system effects. Ingestion may cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects.

**INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED:** Seek immediate medical attention for large ingestions.

**NOTES TO PHYSICIAN:** The principal toxic effects of ethylene glycol, when swallowed, are kidney damage and metabolic acidosis. The combination of metabolic acidosis, an osmol gap and oxalate crystals in the urine is evidence of ethylene glycol poisoning. Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. Respiratory support with mechanical ventilation may be required. There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth, and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphagia.

Ethanol is antidotal and its early administration may block the formation of nephrotoxic metabolites of ethylene glycol in the liver. The objective is to rapidly achieve and maintain a blood ethanol level of approximately 100 mg/dl by giving a loading dose of ethanol followed by a maintenance dose. Intravenous administration of ethanol is the preferred route. Ethanol blood levels should be checked frequently. Hemodialysis may be required. 4-Methyl pyrazole (Fomepizole®), a potent inhibitor of alcohol dehydrogenase, has been used therapeutically to decrease the metabolic consequences of ethylene glycol poisoning.



Fomepizole® is easier to use clinically than ethanol, does not cause CNS depression or hypoglycemia and requires less monitoring than ethanol. Additional therapeutic modalities which may decrease the adverse consequences of ethylene glycol metabolism are the administration of both thiamine and pyridoxine. As there are complicated and serious overdoses, we recommend you consult with the toxicologists at your poison control center.

**5. Firefighting Measures**

**SUITABLE EXTINGUISHING MEDIA:** For large fires, use alcohol type or all-purpose foams. For small fires, use water spray, carbon dioxide or dry chemical.

**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:** A solid stream of water or foam directed into hot, burning liquid can cause frothing. Burning may produce carbon monoxide and carbon dioxide.

**SPECIAL FIRE FIGHTING PROCEDURES:** Do not spray pool fires directly. Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

**6: Accidental Release Measures**

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Wear appropriate protective clothing and equipment (See Section 8).

**METHODS AND MATERIALS FOR CONTAINMENT/CLEANUP:** Collect with absorbent material and place in appropriate, labeled container for disposal or, if permitted flush spill area with water.

**7. Handling and Storage**

**PRECAUTIONS FOR SAFE HANDLING:**

Harmful or Fatal if Swallowed. Do not drink antifreeze or solution. Avoid eye and prolonged or repeated skin contact. Avoid breathing vapors or mists. Wash exposed skin thoroughly with soap and water after use. Do not store in opened or unlabeled containers. Keep container away from open flames and excessive heat. Do not reuse empty containers unless properly cleaned. Empty containers retain product residue and may be dangerous. Do not cut, weld, drill, etc. containers, even empty.

Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Published "autoignition" or "ignition" temperatures cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Use of this product in elevated temperature applications should be thoroughly evaluated to assure safe operating conditions.

**CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:** Store away from excessive heat and oxidizers.

**NFPA CLASSIFICATION:** IIIB

**8. Exposure Controls / Personal Protection**

**EXPOSURE GUIDELINES**

CHEMICAL	EXPOSURE LIMIT
Ethylene Glycol	25 ppm TWA, 50 ppm STEL ACGIH TLV (as vapor) 10 mg/m <sup>3</sup> TWA ACGIH TLV (as inhalable fraction of the aerosol)
2-Ethyl Hexanoic Acid, Sodium Salt	None Established



Neodecanoic Acid, Sodium Salt	None Established
Diethylene Glycol	10 mg/m <sup>3</sup> TWA AIHA WEEL

VENTILATION: Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits.

RESPIRATORY PROTECTION: For operations where the TLV is exceeded a NIOSH approved respirator with organic vapor cartridges and dust/mist prefilters or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select and use in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Chemical resistant gloves such as neoprene or PVC where contact is possible.

EYE PROTECTION: Splash-proof goggles.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact.

### 9. Physical and Chemical Properties

APPEARANCE:	Yellow liquid	ODOR:	Characteristic odor
ODOR THRESHOLD:	None	pH:	8.7-9.2
MELTING/FREEZING POINT:	-34°F (-36.6°C) – -36°F (-37.7°C)	BOILING POINT/RANGE:	327°F (164°C) – 340°F (171.1°C)
FLASH POINT:	254 °F (123 °C) TOC >230 °F (>110 °C) Setaflash	EVAPORATION RATE:	Not determined
FLAMMABILITY (SOLID, GAS)	Not Applicable	FLAMMABILITY LIMITS:	LEL: Not determined UEL: Not determined
VAPOR PRESSURE:	<0.06 mm Hg @20°C	VAPOR DENSITY:	2.1
RELATIVE DENSITY:	1.07-1.14	SOLUBILITIES	Water: Complete
PARTITION COEFFICIENT (n-octanol/water)	Not determined	AUTOIGNITION TEMPERATURE:	Not determined
DECOMPOSITION TEMPERATURE:	Not determined	VISCOSITY:	Not determined

### 10. Stability and Reactivity

REACTIVITY: Normally unreactive

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: Reaction with strong oxidizers will generate heat.

CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.



**11. Toxicological Information**

**POTENTIAL HEALTH EFFECTS:**

**ACUTE HAZARDS:**

**INHALATION:** May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations caused, for example, by heating the material in an enclosed and poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness and irregular eye movements.

**SKIN CONTACT:** No evidence of adverse effects from available information.

**EYE CONTACT:** Liquid, vapors or mist may cause discomfort in the eye with persistent conjunctivitis, seen as slight excess redness or conjunctiva. Serious corneal injury is not anticipated.

**INGESTION:** May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary edema may develop. Severe kidney damage which may be fatal may follow the swallowing of ethylene glycol. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, and difficulty with swallowing, during the late stages of severe poisoning.

**CHRONIC EFFECTS:** Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, particularly dizziness and jerking eye movements. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined. 2-Ethyl Hexanoic Acid, Sodium Salt is suspected of causing developmental effects based on animal data.

**CARCINOGENICITY LISTING:** None of the components of these products is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH or OSHA.

**ACUTE TOXICITY VALUES:**

Calculated ATEmix: LD50 Oral 1000 mg/kg (Based on the Point Estimate for Ethylene Glycol)

Ethylene Glycol: LD50 Oral Rat: 4700 mg/kg  
LD50 Skin Rabbit: 9530 mg/kg

Diethylene Glycol: LD50 Oral Rat: 12,565 mg/kg  
LD50 Skin Rabbit: 11,890 mg/kg

**SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH:** Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations 150, 1,000 and 2,500 mg/m<sup>3</sup> for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentrations, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1,000 and 2,500 mg/m<sup>3</sup>) and developmental toxicity in with minimal evidence of teratogenicity (2,500 mg/m<sup>3</sup>). The no-effects concentration (based on maternal toxicity) was 500 mg/m<sup>3</sup>. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen; there is currently no available information to suggest that ethylene glycol caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity; exposure to high aerosol concentration is only minimally effective in producing developmental toxicity; the major route for producing developmental toxicity is perorally.



Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous invitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects. This product contains less than 0.3% tolytriazole which has demonstrates mutagenic activity in a bacterial test system. A correlation has been established between mutagenic activity and carcinogenic activity for many chemicals. Tolytriazole has not been identified as a carcinogen or probable carcinogen by NTP, IARC or OSHA.

In a study of Wistar rats, adverse developmental results were reported at a dose of 100 mg / kg of body weight for 2-Ethyl Hexanoic Acid, Sodium Salt.

## 12. Ecological Information

### ECOTOXICITY:

Ethylene Glycol: LC50 Fathead Minnow <10,000 mg/L/96 hr.  
EC50 Daphnia Magna 100,000 mg/L/48 hr.  
Bacterial (Pseudomonas putida): 10,000 mg/l  
Protozoa (Entosiphon sulcatum and Uronema parduczi; Chatton-Lwoff) : >10,000 mg/l  
Algae (Microcystis aeruginosa): 2,000 mg/l  
Green algae (Scenedesmus quadricauda) : >10,000 mg/l  
Diethylene Glycol: LC50 western mosquitofish >32,000 mg/L/96 hr.

### PERSISTENCE AND DEGRADABILITY:

Ethylene Glycol is readily biodegradable (97-100% in 2-12 days). Diethylene glycol is readily biodegradable (>70% in 19 days).

### BIOACCUMULATIVE POTENTIAL:

Ethylene glycol: A BCF of 10, reported for ethylene glycol in fish, Golden ide (*Leuciscus idus melanotus*), after 3 days of exposure suggests the potential for bio concentration in aquatic organisms is low.  
Diethylene glycol: An estimated BCF of 3 suggests the potential for bio concentration in aquatic organisms is low.

MOBILITY IN SOIL: Ethylene glycol and diethylene glycol are highly mobile in soil.

OTHER ADVERSE EFFECTS: None known

## 13. Disposal Considerations

Dispose of product in accordance with all local, state/provincial and federal regulations.

## 14. Transport Information

U.S. DOT HAZARD CLASSIFICATION: Not Regulated (unless package contains a reportable quantity)

Note: IF A SHIPMENT OF A REPORTABLE QUANTITY (5,000 LBS/560 GAL.) IN A SINGLE PACKAGE IS INVOLVED, THE FOLLOWING INFORMATION APPLIES:

PROPER SHIPPING NAME: RQ, Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)  
UN NUMBER: UN3082  
PACKING GROUP: III  
LABELS REQUIRED: Class 9

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION: Not Regulated



CANADIAN TDG CLASSIFICATION: Not Regulated

**15. Regulatory Information**

EPA SARA 311/312 HAZARD CLASSIFICATION: Classified under OSHA Hazcom 2012 GHS classification as per Section 2 of this SDS.

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Ethylene Glycol	107-21-1	80-100%
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PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (100% maximum) of 5,000 lbs, is 5,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

CALIFORNIA PROPOSITION 65:



**WARNING:** This product can expose you to chemicals including Ethylene Glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

EPA TSCA INVENTORY: All of the components of this material are listed on or exempt from the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on or exempt from the Canadian Domestic Substances List.

JAPAN: All of the ingredients of this product are listed on or exempt from the Japanese Existing and New Chemical Substances (MITI) List.

AUSTRALIA: All of the ingredients of this product are listed on or exempt from the Australian Inventory of Chemical Substances.

NEW ZEALAND: All of the ingredients of this product are listed on or exempt from the New Zealand Inventory of Chemicals (NZIoC).

KOREA: All of the ingredients of this product are listed on or exempt from the Korean Existing Chemical List (KECL).

PHILIPPINES: All of the ingredients of this product are listed on or exempt from the Philippine Inventory of Chemical and Chemical Substance (PICCS)

CHINA: All of the ingredients of this product are listed on or exempt from the Inventory of Existing Chemical Substance in China (IECSC).

TAIWAN: All of the ingredients of this product are listed on or exempt from the Taiwan Chemical Substance Inventory. (TCSI)



**16. Other Information**

NFPA RATING (NFPA 704) - FIRE: 1      HEALTH: 2      INSTABILITY: 0

REVISION SUMMARY: Update. Changes to Sections 2, 11 & 15.

SDS Date of Preparation/Revision: January 27, 2021

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.



Prestone® 50/50 Prediluted Engine Coolant/Antifreeze
Prestone® 50/50 Ready-to-Use Engine Coolant/Antifreeze
Date Prepared: 10/26/2022

SAFETY DATA SHEET

1. Product and Company Identification

SDS ID: SDS508
PRODUCT NAME: Prestone® 50/50 Prediluted Engine Coolant/Antifreeze
Prestone® 50/50 Ready-to-Use Antifreeze/Coolant
PRODUCT NUMBER: AF2050M, AF2050ML, AF2050M19, AF2050M200, AF2100, AF2100LCZ, AF2100LD,
AF2100LHR, AF2100LRU, AF2100LT/F, AF2100PL, AF2100RU, AF2100S/F, AF2100S/FC,
AF2100UK, AF2100/GF, AF2100/GFC, AF2100/X, AF2100-1KL/GF, AF2100-Retro/F,
AF2155/GF, AF2725, AF2725/GF, AF12050M, PDSPLY36-AFAS, PDSPLY36-AFASB,
PDSPLY36-AFBW, PDSPLY36-AFC, PRES01R, PRES04R, WSS-M97B57-A2, 65077, 71175,
71175/GF, 71175/GFC, 71175/GFC3, 71183, 71217, AF2300/F, AF2400/F, 78213/FC3, 78213/FC,
78213/F, 78205/F, 78205/FC, 78205/FC3, AF2100SAM/F, CAN71175-72/F
FORMULA NUMBER: YA-956BY-P50, YA-956BY-P50-B, YA-956BY-P50M, YA-956BY-P50M-B, YA-992-P50, YA-992-SC-2-P50

MANUFACTURER: CANADIAN OFFICE: MEXICO OFFICE:
Prestone Products Prestone Canada ASG Operations Mexico S. de R.L. de C.V.
Corporation 101 MacIntosh Blvd. Carretera Mexico Cuautitlan, Kilometro 31.5, Nave
69 Eagle Rd. Concord, ON L4K 4L5 Industrial 5,
Danbury, CT 06810 Loma Bonita, Cuautitlan, Mexico, 54800

MEDICAL EMERGENCIES AND ALL OTHER INFORMATION PHONE NUMBER:
(888)269-0750 (in the US and Canada)
01-800-715-4135 (in Mexico)
TRANSPORTATION EMERGENCY PHONE NUMBER (Chemical Spills and Transport Accidents only):
CHEMTREC 1-800-424-9300 (in the US and Canada) +1 703 741-5970 (outside the US and Canada)

PRODUCT USE: Automobile antifreeze – consumer product
RESTRICTIONS ON USE: None identified

2. Hazards Identification

GHS/HAZCOM 2012 Classification:

Table with 2 columns: Health, Physical. Health: Acute Toxicity Category 4 (oral), Specific Target Organ Toxicity – Repeated Exposure Category 2, Toxic to Reproduction Category 2. Physical: Not Hazardous.

Label Elements

Warning symbols: Exclamation mark and Health hazard. Text: WARNING! H302 Harmful if swallowed. H361d Suspected of damaging the unborn child. H373 May cause damage to kidneys through prolonged or repeated exposure.



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**Prevention:**

- P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P260 Do not breathe mist or vapors.  
 P264 Wash exposed skin thoroughly after handling.  
 P270 Do not eat, drink, or smoke when using this product.  
 P280 Wear protective gloves.

**Response:**

- P301 + P312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.  
 P330 Rinse mouth.  
 P308 + P313 IF exposed or concerned: Get medical advice.

**Disposal:**

- P405 Store locked up.  
 P501 Dispose of contents and container in accordance with local and national regulations.

### 3. Composition/Information on Ingredients

Component	CAS No.	Percent w/w
Ethylene Glycol	107-21-1	30-60
Water	7732-18-5	30-60
Diethylene Glycol	111-46-6	0-5
2-Ethyl Hexanoic Acid, Sodium Salt	19766-89-3	0-5

The exact concentrations are a trade secret.

### 4. First Aid Measures

**INHALATION:** Remove the victim to fresh air. If breathing has stopped administer artificial respiration. If breathing is difficult, have medical personnel administer oxygen. Get medical attention.

**SKIN CONTACT:** Remove contaminated clothing. Immediately wash contacted area thoroughly with soap and water. If irritation persists, get medical attention.

**EYE CONTACT:** Immediately flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

**INGESTION:** Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person.

**MOST IMPORTANT SYMPTOMS:** May cause eye irritation. Inhalation of mists may cause nose and throat irritation and nervous system effects. Ingestion may cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects.

**INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED:** Seek immediate medical attention for large ingestions.

**NOTES TO PHYSICIAN:** When ingested, the principle toxic effects of the product are due to ethylene glycol and include metabolic acidosis and renal failure. The presence of anion gap with accompanying metabolic acidosis is highly suggestive of significant ingestion. Late presenting symptoms may include evidence of an osmol gap, significant hypocalcemia, cardiac arrhythmias, pulmonary edema, presence of calcium oxalate crystals in the urine or effects on seventh, eighth, and ninth cranial nerves.



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Date Prepared: 10/26/2022

Early administration of either ethanol or fomepizole (Antizol ®) as antidotes can prevent development of the toxic metabolites of ethylene glycol that lead to serious systemic toxicity. Hemodialysis may be needed for the treatment of severely toxic patients. The administration of thiamine and pyridoxine is also recommended.

**5. Firefighting Measures**

SUITABLE EXTINGUISHING MEDIA: Use any media appropriate for the surrounding fire.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: A solid stream of water or foam directed into hot, burning liquid can cause frothing. Burning may produce carbon monoxide and carbon dioxide.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS: Do not spray pool fires directly. Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

**6: Accidental Release Measures**

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Wear appropriate protective clothing and equipment (See Section 8).

METHODS AND MATERIALS FOR CONTAINMENT/CLEANUP: Collect with absorbent material and place in appropriate, labeled container for disposal or, if permitted flush spill area with water.

**7. Handling and Storage**

PRECAUTIONS FOR SAFE HANDLING:

Harmful or Fatal if Swallowed. Do not drink antifreeze or solution. Avoid eye and prolonged or repeated skin contact. Avoid breathing vapors or mists. Wash exposed skin thoroughly with soap and water after use. Keep container away from open flames and excessive heat. Do not reuse empty containers unless properly cleaned. Empty containers retain product residue and may be dangerous. Do not cut, weld, drill, etc. containers, even empty.

Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Published "autoignition" or "ignition" temperatures cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Use of this product in elevated temperature applications should be thoroughly evaluated to assure safe operating conditions.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: Do not store in opened or unlabeled containers. Store away from excessive heat and oxidizers.

NFPA CLASSIFICATION: IIIB (May qualify for the following consumer quantity exemption: Consumer products that contain not more than 50 percent by volume of water-miscible flammable or combustible liquids, with the remainder of the product consisting of components that do not burn and where packaged in individual containers that do not exceed 1.3-gal (5 L) capacity.)

**8. Exposure Controls / Personal Protection**

EXPOSURE GUIDELINES

CHEMICAL	EXPOSURE LIMIT
Ethylene Glycol	25 ppm TWA, 50 ppm STEL ACGIH TLV (as vapor) 10 mg/m <sup>3</sup> TWA ACGIH TLV (as inhalable fraction of the aerosol)



Prestone® 50/50 Prediluted Engine Coolant/Antifreeze
Prestone® 50/50 Ready-to-Use Engine Coolant/Antifreeze

Date Prepared: 10/26/2022

Table with 2 columns: Component and Exposure Limit. Rows include Water, Diethylene Glycol, and 2-Ethyl Hexanoic Acid.

APPROPRIATE ENGINEERING CONTROLS: Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: For operations where the occupational exposure limit is exceeded a NIOSH approved respirator with organic vapor cartridges and dust/mist prefilters or supplied air respirator is recommended.

GLOVES: Chemical resistant gloves such as neoprene or PVC where contact is possible.

EYE PROTECTION: Splash-proof goggles.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact.

9. Physical and Chemical Properties

Table with 4 columns: Property, Value 1, Value 2, Value 3. Rows include APPEARANCE, ODOR THRESHOLD, MELTING/FREEZING POINT, FLASH POINT, FLAMMABILITY, VAPOR PRESSURE, RELATIVE DENSITY, PARTITION COEFFICIENT, and DECOMPOSITION TEMPERATURE.

10. Stability and Reactivity

REACTIVITY: Normally unreactive

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: Reaction with strong oxidizers will generate heat.

CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: Normally unreactive, however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

11. Toxicological Information



**Prestone® 50/50 Prediluted Engine Coolant/Antifreeze**  
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 Date Prepared: 10/26/2022

**POTENTIAL HEALTH EFFECTS:**

**ACUTE HAZARDS:**

**INHALATION:** May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations caused, for example, by heating the material in an enclosed and poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness and irregular eye movements.

**SKIN CONTACT:** No evidence of adverse effects from available information.

**EYE CONTACT:** Liquid, vapors or mist may cause discomfort in the eye with persistent conjunctivitis, seen as slight excess redness or conjunctiva. Serious corneal injury is not anticipated.

**INGESTION:** May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary edema may develop. Severe kidney damage which may be fatal may follow the swallowing of ethylene glycol. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, and difficulty with swallowing, during the late stages of severe poisoning.

**CHRONIC EFFECTS:** Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, particularly dizziness and jerking eye movements. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined. 2-Ethyl Hexanoic Acid, Sodium Salt is suspected of causing developmental effects based on animal data.

**CARCINOGENICITY LISTING:** None of the components of these products is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, or OSHA.

**ACUTE TOXICITY VALUES:**

Ethylene Glycol: LD50 Oral Rat: 4700 mg/kg  
 LD50 Skin Rabbit: 9530 mg/kg

Diethylene Glycol: LD50 Oral Rat: 12,565 mg/kg  
 LD50 Skin Rabbit: 11,890 mg/kg

2-Ethyl Hexanoic Acid, Sodium Salt:  
 LD50 Oral Rat: 2,043 mg/kg  
 LD50 Skin Rat: >2,000 mg/kg

**SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH:**

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations 150, 1,000 and 2,500 mg/m<sup>3</sup> for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentrations, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1,000 and 2,500 mg/m<sup>3</sup>) and developmental toxicity in with minimal evidence of teratogenicity (2,500 mg/m<sup>3</sup>). The no-effects concentration (based on maternal toxicity) was 500 mg/m<sup>3</sup>. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen; there is currently no available information to suggest that ethylene glycol caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity; exposure to high aerosol concentration is only minimally effective in producing developmental toxicity; the major route for producing developmental toxicity is perorally.



**Prestone® 50/50 Prediluted Engine Coolant/Antifreeze**  
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Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous invitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

In a study of Wistar rats, adverse developmental results were reported at a dose of 100 mg / kg of body weight for 2-Ethyl Hexanoic Acid, Sodium Salt.

This product contains less than 0.1% tolytriazole which has demonstrates mutagenic activity in a bacterial test system. A correlation has been established between mutagenic activity and carcinogenic activity for many chemicals. Tolytriazole has not been identified as a carcinogen or probable carcinogen by NTP, IARC, ACGIH or OSHA.

**12. Ecological Information**

**ECOTOXICITY:**

- Ethylene Glycol: LC50 Fathead Minnow <10,000 mg/L/96 hr
- EC50 Daphnia Magna 100,000 mg/L/48 hr
- Bacterial (Pseudomonas putida): 10,000 mg/l
- Protozoa (Entosiphon sulcatum and Uronema parduczi; Chatton-Lwoff): >10,000 mg/l
- Algae (Microcystis aeruginosa): 2,000 mg/l
- Green algae (Scenedesmus quadricauda): >10,000 mg/l
- Diethylene Glycol: LC50 western mosquitofish >32,000 mg/L/96 hr

**PERSISTENCE AND DEGRADABILITY:**

Ethylene Glycol is readily biodegradable (97-100% in 2-12 days). Diethylene glycol is readily biodegradable (>70% in 19 days).

**BIOACCUMULATIVE POTENTIAL:**

Ethylene glycol: A BCF of 10, reported for ethylene glycol in fish, Golden ide (Leuciscus idus melanotus), after 3 days of exposure suggests the potential for bioconcentration in aquatic organisms is low.  
Diethylene glycol: An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low.

**MOBILITY IN SOIL:** Ethylene glycol and diethylene glycol are highly mobile in soil.

**OTHER ADVERSE EFFECTS:** None known

**13. Disposal Considerations**

Dispose of product in accordance with all local, state/provincial and federal regulations.

**14. Transport Information**

U.S. DOT HAZARD CLASSIFICATION: Not Regulated (unless package contains a reportable quantity)

Note: IF A SHIPMENT OF A REPORTABLE QUANTITY (8,333 LBS/933 GAL.) IN A SINGLE PACKAGE IS INVOLVED, THE FOLLOWING INFORMATION APPLIES:

- PROPER SHIPPING NAME: RQ, Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
- UN NUMBER: UN3082
- PACKING GROUP: III
- LABELS REQUIRED: Class 9

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION: Not Regulated



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Date Prepared: 10/26/2022

CANADIAN TDG CLASSIFICATION: Not Regulated

**15. Regulatory Information**

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (60% maximum) of 5,000 lbs., is 8,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.


EPA SARA 311/312 HAZARD CLASSIFICATION: Classified under OSHA Hazcom 2012 GHS classification as per Section 2 of this SDS.

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Ethylene Glycol	107-21-1	30-60%
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PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CALIFORNIA PROPOSITION 65:

 **WARNING:** This product can expose you to chemicals including Ethylene Glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

EPA TSCA INVENTORY: All of the components of this material are listed on or exempt from the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on or exempt from the Canadian Domestic Substances List.

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): All of the ingredients are listed on or exempt from the EINECS inventory.

JAPAN: All of the ingredients of this product are listed on or exempt from the Japanese Existing and New Chemical Substances (MITI) List.

AUSTRALIA: All of the ingredients of this product are listed on or exempt from the Australian Inventory of Chemical Substances. The sodium salt of 2-ethylhexanoic acid is not listed on the chemical inventory however, it is a reaction by product of the neutralization of antifreeze and therefore is exempt.

KOREA: All of the ingredients of this product are listed on or exempt from the Korean Existing Chemical List (KECL).

PHILIPPINES: All of the ingredients of this product are listed on or exempt from the Philippine Inventory of Chemical and Chemical Substance (PICCS)

CHINA: All of the components of this product are listed on or exempt from the Inventory of Existing Chemical Substance in China (IECSC). The sodium salt of neodecanoic acid is not listed on the chemical inventory however, it is a reaction by product of the neutralization of antifreeze and therefore is exempt.

TAIWAN: All the components of this product are listed on the Taiwan inventory (TCSI).

**16. Other Information**

NFPA RATING (NFPA 704) - FIRE: 1

HEALTH: 2

INSTABILITY: 0



**SDS 508**  
**Prestone® 50/50 Prediluted Engine Coolant/Antifreeze**  
**Prestone® 50/50 Ready-to-Use Engine Coolant/Antifreeze**  
**Date Prepared: 10/26/2022**

REVISION SUMMARY: Sections: 1, 9.

SDS Date of Preparation/Revision: October 26, 2022

This SDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

# Safety Data Sheet



## SECTION 1 IDENTIFICATION

### Havoline Xtended Life Antifreeze/Coolant - Concentrate

**Recommended Use:** Automotive Coolant

**Restrictions on Use:** Consult supplier when used other than those specified.

**Other means of identification:** Not applicable

**Product Number(s):** 236542

**Company Identification**

Chevron Products Company  
a division of Chevron U.S.A. Inc.  
1400 Smith Street  
Houston, TX 77002  
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:**

- Acute oral toxicant: Category 4.
- Reproductive toxicant (developmental): Category 1B.
- Target organ toxicant (repeated exposure): Category 2.



**Signal Word:** Danger

**Health Hazards:**

- Harmful if swallowed.
- May damage the unborn child.
- May cause damage to organs (Kidney) 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.
- Do not breathe fume, gas, mist, vapours, or spray.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves, protective clothing, eye protection, and face protection.

**Response:**

- IF SWALLOWED: Call a POISON CENTER, doctor, or physician if you feel unwell.
- IF exposed or concerned: Get medical advice or attention.
- Rinse mouth.

**Storage:**

- Store locked up.

**Disposal:**

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

**HAZARDS NOT OTHERWISE CLASSIFIED:** Not Applicable

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene glycol	107-21-1	80 - 100 %weight
Potassium 2-ethylhexanoate	3164-85-0	1 - 5 %weight
Tolyltriazole	29385-43-1	0.1 - 1 %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:** 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:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**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:** May be harmful 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.

**DELAYED OR OTHER HEALTH EFFECTS:**

**Reproduction and Birth Defects:** Swallowing this material may cause harm to the unborn child 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: Kidney See Section 11 for additional information. Risk depends on duration and level of exposure.

**Indication of any immediate medical attention and special treatment needed** Not Applicable

**SECTION 5 FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:** Dry Chemical, CO2, water spray (fog) or alcohol resistant foam.

**UNSUITABLE EXTINGUISHING MEDIA:** No data available

**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. Combustion may form oxides of: Potassium.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment, and emergency procedures:** Observe all relevant local and international regulations. Eliminate all sources of ignition in vicinity of spilled material. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.

**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. 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 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 workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

### ENGINEERING CONTROLS:

Use general ventilation, local exhaust ventilation, or a combination of both.

### 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 chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	120
Neoprene	0.61	120
Nitrile	0.8	120
Polyvinyl Chloride (PVC)	1.5	120
Viton Butyl	0.3	120

**Respiratory Protection:** A site-specific risk assessment should be conducted by an Occupational Hygienist or a Safety Professional to determine the type and use of respiratory protective equipment. When a site-specific risk assessment determines that respiratory protection is required, use an approved

respirator such as:

#### **Air purifying respirator -**

If airborne concentration limits exceed the applicable occupational exposure limit, but are below the maximum use concentration.

Vapors only: organic vapor cartridge (filter type A3 per EN 529:2005).

Vapors and particulates (including generated mists): both an organic vapor cartridge & particulate filter (AP3 filter per EN 529:2005).

Refer to respirator manufacturers to obtain service life of cartridge / filter.

#### **Positive pressure air-supplying respirator -**

If airborne concentration limits exceed the maximum use concentration offered from an air purifying respirator.

Refer to EN 529:2005, USA OSHA 1910.134, and/or other applicable local/regional/national/international standards for regulatory requirements.

#### **Occupational Exposure Limits:**

<b>Component</b>	<b>Agency</b>	<b>Form</b>	<b>TWA</b>	<b>STEL</b>	<b>Ceiling</b>	<b>Notation</b>
Ethylene glycol	ACGIH	--	0.01 ppm	--	--	Skin
Ethylene glycol	ACGIH	Inhalable aerosol	--	10 mg/m <sup>3</sup>	--	--
Ethylene glycol	ACGIH	Vapor fraction	25 ppm	50 ppm	--	--

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:** Orange

**Physical State:** Liquid

**Odor:** Faint or Mild

**Odor Threshold:** No data available

**pH:** 8 - 8.6; 33%volume @ 20°C (solution in water)

**Vapor Pressure:** No data available

**Relative Vapor Density:** No data available

**Initial Boiling Point:** 180°C (356°F) (Estimated)

**Solubility:** Soluble in water.

**Freezing Point:** -18°C (-0.4°F) (Typical)

**Melting Point:** Not Applicable

**Specific Gravity:** 1.115 - 1.130 @ 15.6°C (60°F)

**Particle Characteristics:** Not applicable

**Density:** 1.07 kg/l @ 15°C (59°F) (Typical)

**Kinematic Viscosity:** No data available

**Coefficient of Therm. Expansion / °F:** No data available

**Evaporation Rate:** No data available

**Decomposition temperature:** No data available

**Partition coefficient n-octanol/water (logarithmic value):** No data available

#### **FLAMMABLE PROPERTIES:**

**Flammability (solid, gas):** Not Applicable

**Flashpoint:** (Pensky-Martens Closed Cup) 122 °C (252 °F) (Estimated)

**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.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Incompatibility With Other Materials:** Not applicable

**Hazardous Decomposition Products:** Aldehydes (Elevated temperatures), Ketones (Elevated temperatures)

## SECTION 11 TOXICOLOGICAL INFORMATION

### Information on toxicological effects

**Serious Eye Damage/Irritation:** The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Skin Corrosion/Irritation:** The material is not considered a skin irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Dermal Toxicity:** The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Oral Toxicity:** This material is harmful if swallowed. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Inhalation Toxicity:** The material is not considered an inhalation toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Toxicity Estimate (oral):** 1678 mg/kg

**Germ Cell Mutagenicity:** The material is not considered a mutagen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Carcinogenicity:** The material is not considered a carcinogen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Reproductive Toxicity:** This material may damage the unborn child. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Specific Target Organ Toxicity - Single Exposure:** The material is not considered a target organ toxicant (single exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Specific Target Organ Toxicity - Repeated Exposure:** This material may cause damage to organs through prolonged or repeated exposure. The product has not been tested. The statement is based on

evaluation of data for similar materials or product components.

**Aspiration Hazard:** The material is not considered an aspiration hazard.

**ADDITIONAL TOXICOLOGY INFORMATION:**

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.

2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenicity (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate via intraperitoneal injection during pregnancy.

**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 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.  
Partition coefficient n-octanol/water (logarithmic value): 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 TRANSPORT UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** 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

### EPCRA 311/312 CATEGORIES:

Acute toxicity (any route of exposure)

Reproductive toxicity

Specific target organ toxicity (single or repeated exposure)

### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1

05=MA RTK

01-2A=IARC Group 2A

06=NJ RTK

01-2B=IARC Group 2B

07=PA RTK

02=NTP Carcinogen

08-1=TSCA 5(e)

03=EPCRA 313

08-2=TSCA 12(b)

04=CA Proposition 65

The following components of this material are found on the regulatory lists indicated.

Ethylene glycol

03, 04, 05, 06, 07

### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AIIIC (Australia), DSL (Canada), EINECS (European Union), IECSC (China), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan), KECI (Korea).

### 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: 1 Flammability: 1 Reactivity: 0

**HMIS RATINGS:** Health: 1\* 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 American Coatings Association (ACA) (for HMIS ratings).

**REVISION STATEMENT:**

- SECTION 01 - Company SDS Address information was modified.
- SECTION 02 - Precautionary Statements information was modified.
- SECTION 03 - Composition information was modified.
- SECTION 05 - Extinguishing Media information was modified.
- SECTION 06 - Personal Precautions, Protective Equipment and Emergency Procedures information was modified.
- SECTION 08 - Respiratory Protection information was modified.
- SECTION 09 - Physical/Chemical Properties information was modified.
- SECTION 15 - Chemical Inventories information was added.
- SECTION 15 - Chemical Inventories information was modified.
- SECTION 15 - Regulatory Information information was modified.

**Revision Date:** October 14, 2025

**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	PNOS - Particles Not Otherwise Specified

Prepared according to the 29 CFR 1910.1200 (2024) by Chevron.

**The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.**

# Safety Data Sheet



## SECTION 1 IDENTIFICATION

### Delo ELC Antifreeze/Coolant - Concentrate

**Recommended Use:** Heavy Duty Coolant

**Restrictions on Use:** Consult supplier when used other than those specified.

**Product Number(s):** 227808

**Other means of identification:** Not applicable

#### Company Identification

Chevron Canada Limited  
500 - 5th Ave. SW  
Calgary, ALBERTA T2P 0L7  
Canada  
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: (800) LUBE TEK

## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION:

- Acute oral toxicant: Category 4.
- Reproductive toxicant (developmental): Category 1B.
- Target organ toxicant (repeated exposure): Category 2.



**Signal Word:** Danger

**Health Hazards:**

- Harmful if swallowed (H302).
- May damage the unborn child (H360D).
- May cause damage to organs (Kidney) through prolonged or repeated exposure (H373).

**PRECAUTIONARY STATEMENTS:**

**Prevention:**

- Obtain special instructions before use (P201).
- Do not handle until all safety precautions have been read and understood (P202).
- Do not breathe fume, gas, mist, vapours, or spray (P260).
- Wash thoroughly after handling (P264).
- Do not eat, drink or smoke when using this product (P270).
- Wear protective gloves, protective clothing, eye protection, and face protection (P280).

**Response:**

- IF SWALLOWED: Call a POISON CENTER, doctor, or physician if you feel unwell (P301+P312).
- IF exposed or concerned: Get medical advice/attention (P308+P313).
- Rinse mouth (P330).

**Storage:**

- Store locked up (P405).

**Disposal:**

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

**OTHER HAZARDS:** Not applicable

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene glycol	107-21-1	80 - 100 %wt/wt
Sodium 2-ethylhexanoate	19766-89-3	3 - 7 %wt/wt
Tolyltriazole	29385-43-1	0.1 - 1 %wt/wt
Sodium Nitrite	7632-00-0	0.1 - 1 %wt/wt

Note that the actual concentration or concentration range of some or all of the above ingredients is considered confidential business information and is being withheld as permitted by WHMIS 2015.

**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:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**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:** May be harmful if swallowed.

**Inhalation:** Not expected to be harmful if inhaled. 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.

### DELAYED OR CHRONIC HEALTH EFFECTS:

**Reproduction and Birth Defects:** Contains material that may cause harm to the unborn child if swallowed 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: Kidney See Section 11 for additional information. Risk depends on duration and level of exposure.

**Indication of any immediate medical attention and special treatment needed** Not Applicable

## SECTION 5 FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Dry Chemical, CO<sub>2</sub>, Aqueous Film Forming Foam (AFFF) or alcohol resistant foam.

**UNSUITABLE EXTINGUISHING MEDIA:** No data available

### 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. Combustion may form oxides of: Sodium.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures:** Observe all relevant local and international regulations. Eliminate all sources of ignition in vicinity of spilled material. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.

**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 as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

**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. Wash thoroughly after handling. Keep out of the reach of children. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe fume, gas, mist, vapours, or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, protective clothing, eye protection, and face protection.

**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 workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

### ENGINEERING CONTROLS:

Use general ventilation, local exhaust ventilation, or a combination of both.

### 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 chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	120
Neoprene	0.61	120
Nitrile	0.8	120
Polyvinyl Chloride (PVC)	1.1	120
Viton Butyl	0.3	120

**Respiratory Protection:** A site-specific risk assessment should be conducted by an Occupational Hygienist or a Safety Professional to determine the type and use of respiratory protective equipment. When a site-specific risk assessment determines that respiratory protection is required, use an approved respirator such as:

**Air purifying respirator -**

If airborne concentration limits exceed the applicable occupational exposure limit, but are below the maximum use concentration.

Vapors only: organic vapor cartridge (filter type A3 per EN 529:2005).

Vapors and particulates (including generated mists): both an organic vapor cartridge & particulate filter (AP3 filter per EN 529:2005).

Refer to respirator manufacturers to obtain service life of cartridge / filter.

**Positive pressure air-supplying respirator -**

If airborne concentration limits exceed the maximum use concentration offered from an air purifying respirator.

Refer to EN 529:2005, USA OSHA 1910.134, and/or other applicable local/regional/national/international standards for regulatory requirements.

**Occupational Exposure Limits:**

Component	Country/ Agency	Form	TWA	STEL	Ceiling	Notation
Ethylene glycol	ACGIH	--	0.01 ppm	--	--	Skin
Ethylene glycol	ACGIH	Inhalable aerosol	--	10 mg/m3	--	--
Ethylene glycol	ACGIH	Vapor fraction	25 ppm	50 ppm	--	--

NOTE ON OCCUPATIONAL EXPOSURE LIMITS: Consult local authorities for acceptable provincial values in Canada. Consult the Canadian Standards Association Standard Z94.4-2011 Selection, Use and Care of Respirators.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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

**Color:** Red

**Physical State:** Liquid

**Odor:** Faint or Mild

**pH:** 8.5 - 8.85

**Vapor Pressure:** Not available

**Relative Vapor Density:** 2.1

**Initial Boiling Point / Boiling Range:** 170°C (338°F) (Minimum)

**Solubility:** Soluble in water.

**Melting Point / Freezing Point:** -29°C (-20.2°F) (Max)

**Relative Density:** 1.115 @ 15.6°C (60°F)

**Particle Characteristics:** Not applicable

**Density:** 1.119 kg/l (Typical)

**Kinematic Viscosity:** Not available

**Decomposition temperature:** Not available

**Partition coefficient n-octanol/water (logarithmic value):** Not available

### FLAMMABLE PROPERTIES:

**Flammability (solid, gas):** Not Available

**Flashpoint:** (Pensky-Martens Closed Cup) 122 °C (252 °F) (Estimated)

**Auto-ignition temperature:** Not available

**Flammability (Explosive) Limits (% by volume in air):** Lower: Not available Upper: Not 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.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Incompatibility With Other Materials:** Not applicable

**Hazardous Decomposition Products:** Aldehydes (Elevated temperatures), Ketones (Elevated temperatures)

**Sensitivity to Mechanical Impact:** No.

## SECTION 11 TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure:** Exposure may occur via ingestion, inhalation, or skin and eye contact.

**Information on toxicological effects**

**Serious Eye Damage/Irritation:** The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Skin Corrosion/Irritation:** The material is not considered a skin irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Dermal Toxicity:** The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Oral Toxicity:** This material is harmful if swallowed. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Inhalation Toxicity:** The material is not considered an inhalation toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components. For additional information on the acute toxicity of the components, call the technical information center.

**Acute Toxicity Estimate (oral):** 1691 mg/kg

**Germ Cell Mutagenicity:** The material is not considered a mutagen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Carcinogenicity:** The material is not considered a carcinogen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Reproductive Toxicity:** This material may damage the unborn child. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Specific Target Organ Toxicity - Single Exposure:**

The material is not considered a target organ toxicant (single exposure). The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Specific Target Organ Toxicity - Repeated Exposure:** This material may cause damage to organs through prolonged or repeated exposure. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Aspiration Hazard:** The material is not considered an aspiration hazard.

**ADDITIONAL TOXICOLOGY INFORMATION:**

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.

2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenicity (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate via intraperitoneal injection during pregnancy.

### **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:** May be harmful if swallowed.

**Inhalation:** Not expected to be harmful if inhaled. 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.

#### **DELAYED OR CHRONIC HEALTH EFFECTS:**

**Reproduction and Birth Defects:** Contains material that may cause harm to the unborn child if swallowed 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: Kidney See Section 11 for additional information. Risk depends on duration and level of exposure.

## **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 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.

Partition coefficient n-octanol/water (logarithmic value): 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 USEPA under RCRA (40CFR261), Environment Canada, or other State, Provincial, and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

## 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.

**TC Shipping Description:** NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER TRANSPORT CANADA

**IMO/IMDG Shipping Description:** NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

**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)

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:**

Not applicable

## SECTION 15 REGULATORY INFORMATION

### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1

01-2A=IARC Group 2A

01-2B=IARC Group 2B

The following components of this material are found on the regulatory lists indicated.

Sodium Nitrite

01-2A

### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AIIC (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States).

## SECTION 16 OTHER INFORMATION

**REVISION STATEMENT:**

SECTION 01 - Product Use information was added.  
 SECTION 02 - Other Hazards information was added.  
 SECTION 02 - Precautionary Statements information was modified.  
 SECTION 03 - Composition information was modified.  
 SECTION 06 - Personal Precautions, Protective Equipment and Emergency Procedures information was modified.  
 SECTION 07 - Precautionary Measures information was added.  
 SECTION 08 - Personal Protective Equipment List information was deleted.  
 SECTION 08 - Respiratory Protection information was added.  
 SECTION 08 - Respiratory Protection information was modified.  
 SECTION 11 - Toxicological Information information was added.

**Revision Date:** December 19, 2024

**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
WHMIS - Workplace 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 WHMIS 2015 by Chevron.

**The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.**

# USED OIL

## Danger!



**Hazard Statement(s)** Harmful if swallowed. Causes skin & eye irritation. May cause or breathing difficulties if inhaled. May cause genetic defects and cancer. May damage fertility/ unborn child. Causes damage to kidneys, central nervous system, and lungs. May be fatal if swallowed and enters airways. **Precautionary Statement(s)** **Prevention** Do not breathe fumes, vapor, or spray. Wash after handling. Use only in a well-ventilated area. **Do not eat, drink or smoke when using this product.** Wear PPE. **Response** IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air & keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN: Wash with soap and water. If skin irritation or rash 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. IF SWALLOWED: Immediately call a POISON CENTER. **Do NOT induce vomiting.** **Storage** in a well-ventilated place. Keep container closed. **Disposal** according to with all applicable regulations. **SAFETY KLEEN\* See Safety Data Sheet for further details \* 800.323.5040**

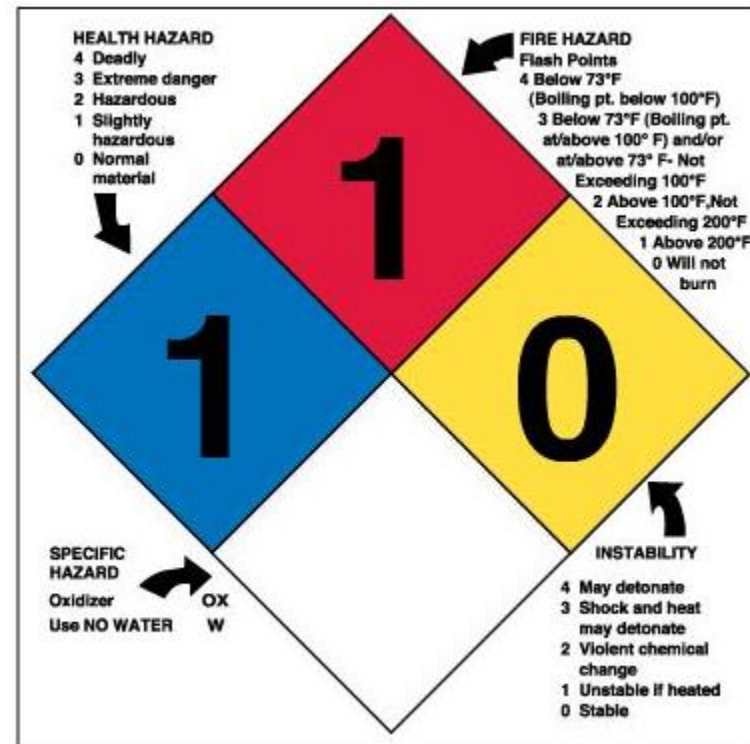


# USED ANTIFREEZE

## Danger!



**Hazard Statement(s)** Causes skin irritation & serious eye irritation. May damage fertility/unborn child. Causes damage to central nervous system, heart, kidneys, and respiratory. **Precautionary Statement(s)** **Prevention** Do not breathe vapor or mist. Wash thoroughly after handling. Wear PPE. Do not eat, drink, or smoke when using product. **Response** IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air & keep comfortable for breathing. Call a POISON CENTER or doctor if feel unwell. IF ON SKIN: Wash with soap and water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing, wash before reuse. 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. **Storage** Keep container tightly closed. **Disposal** in accordance with applicable federal, state and local regulations. **SAFETY KLEEN See SDS for further details 800.323.5040**



# Safety Data Sheet



## SECTION 1 IDENTIFICATION

### Chevron and Texaco Unleaded Gasolines (All Grades)

**Recommended Use:** Fuel

**Restrictions on Use:** For use as a motor fuel only.

**Other means of identification:** Automotive, Calco Mid-Grade Unleaded Gasoline, Calco Premium Gasoline, Calco Regular Unleaded Gasoline, CHEVRON and TEXACO MID-GRADE UNLEADED GASOLINES, CHEVRON and TEXACO PREMIUM UNLEADED GASOLINES, CHEVRON and TEXACO REGULAR UNLEADED GASOLINES, Chevron Mid-Grade Unleaded Gasoline, Chevron Plus Unleaded Gasoline, Chevron Premium Unleaded Gasoline, Chevron Regular Unleaded Gasoline, Chevron Supreme Plus Unleaded Gasoline, Chevron Supreme Unleaded Gasoline, Chevron UL/CQ Gasoline, GASOLINE (GENERIC), Gasolines, Texaco Power Plus Gasoline, Texaco Power Premium Unleaded Gasoline, Texaco Unleaded Gasoline, UNLEADED GASOLINE FOR EXPORT

**Company Identification**

Chevron Products Company  
1400 Smith Street  
Houston, TX 77002  
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: (800) 414-6737

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

## SECTION 2 HAZARDS IDENTIFICATION

**CLASSIFICATION:**

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

- Chronic aquatic toxicant: Category 2.



**Signal Word:** Danger

**Physical Hazards:**

- Extremely flammable liquid and vapour.

**Health Hazards:**

- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause drowsiness or dizziness.
- May cause genetic defects.
- May cause cancer.
- Suspected of damaging the unborn child.
- 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, and hot surfaces. - No smoking.
- Keep cool.
- Ground and bond container and receiving equipment.
- Use explosion-proof electrical, ventilating, lighting, and equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Do not breathe fume, gas, mist, vapours, or spray.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment.
- Wear protective gloves, protective clothing, eye protection, and face protection.

**Response:**

- IF SWALLOWED: Immediately call a POISON CENTER, doctor, or physician.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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.
- IF exposed or concerned: Get medical advice or attention.
- Specific treatment (see Notes to Physician on this label).
- Do NOT induce vomiting.
- If skin irritation occurs: Get medical advice or attention.
- If eye irritation persists: Get medical advice or attention.

- Wash contaminated clothing before reuse.
- In case of fire: Use media specified in the SDS to extinguish.
- Collect spillage.

**Storage:**

- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.

**Disposal:**

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

**HAZARDS NOT OTHERWISE CLASSIFIED:** Not Applicable

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

**Hazardous Substance(s) or Complex Substance(s) required for disclosure**

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %volume

**Hazardous Constituent(s) Contained in Complex Substance(s) required for disclosure**

COMPONENTS	CAS NUMBER	AMOUNT
Toluene	108-88-3	1 - 35 %volume
Pentane, 2,2,4-trimethyl-	540-84-1	10 - 15 %volume
Xylene	1330-20-7	1 - 15 %volume
Trimethylbenzene (3 isomers: 1,2,3-; 1,2,4-; 1,3,5-isomer)	25551-13-7	5 - 10 %volume
Pentane isomers (pentanes)	Mixture	1 - 13 %volume
Butane	106-97-8	0 - 12 %volume
Ethanol	64-17-5	0 - 10 %volume
Hexane	110-54-3	1 - 5 %volume
Benzene	71-43-2	0.1 - 5 %volume
Heptane	142-82-5	1 - 4 %volume
Cyclohexane	110-82-7	1 - 3 %volume
Ethylbenzene	100-41-4	0.1 - 3 %volume
Methylcyclohexane	108-87-2	1 - 2 %volume
Naphthalene	91-20-3	0.1 - 2 %volume
Cumene	98-82-8	0 - 0.3 %volume

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 1 carcinogen (carcinogenic to humans on the basis of sufficient evidence for cancer in humans and the combination of sufficient evidence for cancer in experimental animals and strong mechanistic evidence in exposed 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).

Contains ethanol, 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 cumene, 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 See Section 11 for additional information. Risk depends on duration and level of exposure.

#### **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, CO<sub>2</sub>, water spray (fog) or alcohol resistant foam.

**UNSUITABLE EXTINGUISHING MEDIA:** Do not use water jet.

**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

**Personal precautions, protective equipment, and emergency procedures:** Observe all relevant local and international regulations. 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. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.

**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. Use only as a motor fuel. Do not use for cleaning, pressure appliance fuel, or any other such use. 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:** Improper filling of portable gasoline containers creates danger of fire. Only dispense gasoline into approved and properly labeled gasoline containers. Always place portable containers on the ground. Be sure pump nozzle is in contact with the container while filling. Do not use a nozzle's lock-open device. Do not fill portable containers that are inside a vehicle or truck/trailer bed.

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 workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

### ENGINEERING CONTROLS:

Use general ventilation, local exhaust ventilation, or a combination of both.

### 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 chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Butyl	0.7	7
Neoprene	0.61	7
Nitrile	0.8	60
Nitrile	0.23	2
Polyvinyl Chloride (PVC)	1.1	2

Viton Butyl	0.3	120
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**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	Form	TWA	STEL	Ceiling	Notation
Gasoline	ACGIH	--	300 ppm	500 ppm	--	--
Gasoline	ACGIH	Vapor	300 ppm	500 ppm	--	A3
Toluene	ACGIH	--	20 ppm	--	--	--
Toluene	OSHA Z-2	--	200 ppm	--	300 ppm	--
Pentane, 2,2,4-trimethyl-	ACGIH	--	300 ppm	--	--	--
Pentane, 2,2,4-trimethyl-	OSHA Z-1	--	2350 mg/m3	--	--	--
Xylene	ACGIH	--	20 ppm	--	--	--
Xylene	OSHA Z-1	--	435 mg/m3	--	--	--
Trimethylbenzene (3 isomers: 1,2,3-; 1,2,4-; 1,3,5- isomer)	ACGIH	--	10 ppm	--	--	--
Butane	ACGIH	--	--	1000 ppm	--	--
Ethanol	ACGIH	--	1000 ppm	1000 ppm	--	A4
Ethanol	OSHA Z-1	--	1900 mg/m3	--	--	--
Hexane	ACGIH	--	50 ppm	--	--	Skin
Hexane	OSHA Z-1	--	1800 mg/m3	--	--	--
Benzene	ACGIH	--	0.5 ppm	2.5 ppm	--	Skin
Benzene	ACGIH	Vapor	0.5 ppm	2.5 ppm	--	--
Benzene	CVX	Vapor	0.5 ppm	2.5 ppm	--	--
Benzene	OSHA SRS	--	1 ppm	5 ppm	--	29 CFR 1910.1028
Benzene	OSHA Z-2	--	10 ppm	--	25 ppm	--
Heptane	ACGIH	--	400 ppm	500 ppm	--	--
Heptane	OSHA Z-1	--	2000 mg/m3	--	--	--
Cyclohexane	ACGIH	--	100 ppm	--	--	--
Cyclohexane	OSHA Z-1	--	1050 mg/m3	--	--	--
Ethylbenzene	ACGIH	--	20 ppm	--	--	--
Ethylbenzene	ACGIH	Vapor	100 ppm	--	--	--
Ethylbenzene	OSHA Z-1	--	435 mg/m3	--	--	--
Methylcyclohexane	ACGIH	--	400 ppm	--	--	--
Methylcyclohexane	OSHA Z-1	--	2000 mg/m3	--	--	--
Naphthalene	ACGIH	--	10 ppm	--	--	Skin
Naphthalene	ACGIH	Vapor	10 ppm	15 ppm	--	A4 Skin
Naphthalene	OSHA Z-1	--	50 mg/m3	--	--	--
Cumene	ACGIH	--	5 ppm	--	--	--
Cumene	OSHA Z-1	--	245 mg/m3	--	--	Skin

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 - 15.5 psi (Typical) @ 37.8 °C (100 °F)  
**Relative Vapor Density:** 3 - 4 (Typical)  
**Initial Boiling Point:** 27.2°C (81°F) - 52.8°C (127°F) (Typical)  
**Solubility:** Negligible  
**Freezing Point:** Not Applicable  
**Melting Point:** Not Applicable  
**Specific Gravity:** 0.7 g/ml - 0.8 g/ml @ 15.6°C (60.1°F) (Typical)  
**Particle Characteristics:** Not applicable  
**Density:** No data available  
**Kinematic Viscosity:** <1 SUS @ 37.8°C (100°F)  
**Evaporation Rate:** No data available  
**Decomposition temperature:** No data available  
**Partition coefficient n-octanol/water (logarithmic value):** 2 - 7

**FLAMMABLE PROPERTIES:**

**Flammability (solid, gas):** Not Applicable

**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.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Incompatibility With Other Materials:** Not applicable

**Hazardous Decomposition Products:** None known (None expected)

**SECTION 11 TOXICOLOGICAL INFORMATION**

**Information on toxicological effects**

**Serious Eye Damage/Irritation:** This material causes serious eye irritation. The product has not been tested. The statement is based on evaluation of data for similar materials or 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/m<sup>3</sup> (rat).

**Acute Toxicity Estimate:** Not Determined

**Germ Cell Mutagenicity:** This material may cause genetic defects. The product has not been tested. The

statement is based on evaluation of data for similar materials or product components.

**Carcinogenicity:** This material may cause cancer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components. Gasoline has been classified as a Group 1 carcinogen (carcinogenic to humans on the basis of sufficient evidence for cancer in humans and the combination of sufficient evidence for cancer in experimental animals and strong mechanistic evidence in exposed 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).

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

**Reproductive Toxicity:** This material is suspected of damaging the unborn child. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Specific Target Organ Toxicity - Single Exposure:** This material may cause drowsiness or dizziness. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Specific Target Organ Toxicity - Repeated Exposure:** This material causes damage to organs through prolonged or repeated exposure. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Aspiration Hazard:** This material is considered an aspiration hazard based on the kinematic viscosity of the 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 SDS. 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.

**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 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.

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 cumene.

**SUBCHRONIC TOXICITY:** Two subchronic inhalation studies, in which rats of each sex were exposed for six hours/day, five days/week for thirteen weeks to 0, 50, 100, 500 or 1200 ppm cumene vapor, found that rats exposed to 500 and 1200 ppm had increases in weights of liver, kidneys and adrenals, and microscopic changes in the kidneys. Decreased motor activity in male rats exposed to 500 and 1200 ppm was observed in the first study, but was not duplicated in the second study. Cataracts in the lenses of the eyes, which occurred in both treated and untreated rats in the first study, were not statistically higher in treated animals in the second study, indicating that cumene did not cause cataracts. There were no exposure-related changes in hearing (auditory brainstem response), spermatogenesis or responses in the functional observation battery.

**DEVELOPMENTAL TOXICITY:** In inhalation developmental toxicity studies, there was no evidence of developmental effects either in rabbits exposed to levels up to 2300 ppm on days 6-8 of gestation or in rats exposed to levels up to 1200 ppm on days 6-15 of gestation.

**GENETICTOXICITY:** Cumene was not genotoxic in several in vitro assays including the Ames test, and unscheduled DNA synthesis assay and the Chinese hamster ovary cell chromosome aberration assay.

**CARCINOGENICITY:** IARC has classified cumene as "possibly carcinogenic to humans" (Group 2B). Key findings from lifetime inhalation studies in laboratory rodents were as follows: An increased incidence of kidney tumors was observed in male rats only. These tumors are consistent with alpha-2u-globulin-mediated nephropathy, an effect specific to male rats and is considered irrelevant to humans. An increased incidence of liver tumors was observed in female mice only, and an increased incidence of lung tumors was observed in both male and female mice. The relevance of these cumene-induced liver and lung tumors to humans has not been established.

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 at high concentrations. 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.

## SECTION 12 ECOLOGICAL INFORMATION

### ECOTOXICITY

Gasoline studies have been conducted in the laboratory under a variety of test conditions with a range of fish and invertebrate species. An even more extensive database is available on the aquatic toxicity of individual aromatic constituents. The majority of published studies do not identify the type of gasoline evaluated, or even provide distinguishing characteristics such as aromatic content or presence of lead alkyls. As a result, comparison of results among studies using open and closed vessels, different ages and species of test animals and different gasoline types, is difficult.

The bulk of the available literature on gasoline relates to the environmental impact of monoaromatic (BTEX) and diaromatic (naphthalene, methylnaphthalenes) constituents. In general, non-oxygenated gasoline exhibits some short-term toxicity to freshwater and marine organisms, especially under closed vessel or flow-through exposure conditions in the laboratory. The components which are the most prominent in the water soluble fraction and cause aquatic toxicity, are also highly volatile and can be readily biodegraded by microorganisms.

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

96 hour(s) LC50: 8.3 mg/l (Cyprinodon variegatus)

96 hour(s) LC50: 1.8 mg/l (Mysidopsis bahia)

96 hour(s) LC50: 2.7 mg/l (Oncorhynchus mykiss)

48 hour(s) LC50: 3.0 mg/l (Daphnia magna)

### 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.

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.

Partition coefficient n-octanol/water (logarithmic value): 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.

### 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 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

#### EPCRA 311/312 CATEGORIES:

Aspiration Hazard

Carcinogenicity

Flammable (gases, aerosols, liquids, or solids)

Germ cell mutagenicity

Reproductive toxicity

Serious eye damage or eye irritation

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

#### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	05=MA RTK
01-2A=IARC Group 2A	06=NJ RTK
01-2B=IARC Group 2B	07=PA RTK
02=NTP Carcinogen	08-1=TSCA 5(e)
03=EPCRA 313	08-2=TSCA 12(b)
04=CA Proposition 65	

The following components of this material are found on the regulatory lists indicated.

Gasoline	01-1, 07
Toluene	03, 04, 05, 06, 07
Pentane, 2,2,4-trimethyl-	05, 06, 07
Xylene	03, 05, 06, 07

Trimethylbenzene (3 isomers: 05, 06, 07 1,2,3-; 1,2,4-; 1,3,5- isomer)	
Butane	05, 06, 07
Ethanol	01-1, 02, 04, 05, 06, 07
Hexane	03, 04, 05, 06, 07, 08-2
Benzene	01-1, 02, 03, 04, 05, 06, 07
Heptane	05, 06, 07, 08-2
Cyclohexane	03, 05, 06, 07, 08-2
Ethylbenzene	01-2B, 03, 04, 05, 06, 07
Methylcyclohexane	05, 06, 07
Naphthalene	01-2B, 02, 03, 04, 05, 06, 07
Cumene	01-2B, 02, 03, 04, 05, 06, 07

### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICC (Australia), DSL (Canada), EINECS (European Union), KECl (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), 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 American Coatings Association (ACA) (for HMIS ratings).

### REVISION STATEMENT:

SECTION 01 - Company SDS Address information was modified.  
SECTION 01 - Health Emergency information was modified.  
SECTION 01 - Product Information information was modified.  
SECTION 01 - Product Synonym information was added.  
SECTION 02 - Precautionary Statements information was modified.  
SECTION 03 - Composition information was modified.  
SECTION 04 - Delayed Health Effects - Carcinogenicity information was modified.  
SECTION 05 - Extinguishing Media information was modified.  
SECTION 06 - Personal Precautions, Protective Equipment and Emergency Procedures information was modified.  
SECTION 08 - Occupational Exposure Limit Table information was modified.  
SECTION 08 - Personal Protective Equipment List information was deleted.  
SECTION 08 - Respiratory Protection information was added.  
SECTION 08 - Respiratory Protection information was modified.  
SECTION 08 - Skin Protection information was modified.  
SECTION 09 - Physical/Chemical Properties information was modified.  
SECTION 11 - Additional Toxicology Information information was modified.  
SECTION 11 - Toxicological Information information was modified.  
SECTION 12 - Ecological Information information was modified.  
SECTION 15 - Chemical Inventories information was modified.  
SECTION 15 - Regulatory Information information was modified.

**Revision Date:** August 26, 2025

**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
HMS - 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	PNOS - Particles Not Otherwise Specified

Prepared according to the 29 CFR 1910.1200 (2024) by Chevron.

**The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.**

# Safety Data Sheet



## SECTION 1 IDENTIFICATION

### DIESEL FUEL (GENERIC)

**Recommended Use:** Fuel

**Restrictions on Use:** Consult supplier when used other than those specified.

**Other means of identification:** Not applicable

#### Company Identification

Chevron Products Company  
1400 Smith Street  
Houston, TX 77002  
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

SDS Requests: <http://www.chevron.com/contact/>

Technical Information: (510) 242-5357

**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.
- Acute inhalation toxicant: Category 4.
- Aspiration toxicant: Category 1.
- Carcinogen: Category 1B.
- Skin irritation: Category 2.
- Target organ toxicant (central nervous system): Category 3.
- Target organ toxicant (repeated exposure): Category 2.
- Acute aquatic toxicant: Category 2.
- Chronic aquatic toxicant: Category 2.



**Signal Word:** Danger

**Physical Hazards:**

- Flammable liquid and vapour.

**Health Hazards:**

- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- Harmful if inhaled.
- May cause drowsiness or dizziness.
- May cause cancer.
- 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, and hot surfaces. - No smoking.
- Keep cool.
- Ground and bond container and receiving equipment.
- Use explosion-proof electrical, ventilating, lighting, and equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Do not breathe fume, gas, mist, vapours, or spray.
- Wash thoroughly after handling.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment.
- Wear protective gloves, protective clothing, eye protection, and face protection.

**Response:**

- IF SWALLOWED: Immediately call a POISON CENTER, doctor, or physician.
- IF ON SKIN: Wash with plenty of soap and water.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF exposed or concerned: Get medical advice or attention.
- Specific treatment (see Notes to Physician on this label).
- Do NOT induce vomiting.
- If skin irritation occurs: Get medical advice or attention.
- Take off contaminated clothing and wash it before reuse.
- In case of fire: Use media specified in the SDS to extinguish.
- Collect spillage.

**Storage:**

- Store in a well-ventilated place. Keep container tightly closed.
- Store locked up.

**Disposal:**

- Dispose of contents and container in accordance with applicable local, regional, national, and 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
Alkanes, C10-20-branched and linear	928771-01-1	0 - 5 %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. 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:** Harmful if inhaled. 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 1 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 See Section 11 for additional information. Risk depends on duration and level of exposure.

#### 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 (CO<sub>2</sub>) to extinguish flames.

**UNSUITABLE EXTINGUISHING MEDIA:** No data available

**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

**Personal precautions, protective equipment, and emergency procedures:** Observe all relevant local and international regulations. 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. Keep out unnecessary and unprotected personnel. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions and wear appropriate personal protective equipment as indicated in Section 8.

**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 material presents a fire hazard. Liquid quickly evaporates 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. Fire hazard is greater as liquid temperature rises above -10C (15F). 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 workplace when designing engineering controls and selecting personal protective equipment (PPE). If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, refer to PPE information below.

Factors that affect PPE include, but are not limited to: properties of the chemical, other chemicals which may contact the same PPE, physical requirements (fit & sizing, cut/puncture protection, dexterity, thermal protection, etc.), and potential allergic reactions to the PPE material. It is the responsibility of the user to read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances. Refer to appropriate CEN standards.

### ENGINEERING CONTROLS:

Use general ventilation, local exhaust ventilation, or a combination of both.

### 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 chemical personal protective equipment (PPE) to prevent skin contact. Selection of chemical protective clothing should be performed by an Occupational Hygienist or Safety Professional and be based upon applicable standards (ASTM F739 or EN 374). Using chemical PPE depends upon operations conducted and may include chemical gloves, boots, chemical apron, chemical suit, and complete facial protection. **Refer to PPE manufacturers to obtain breakthrough time information to determine how long PPE can be used before it needs to be replaced.** Unless specific glove manufacturer data indicates otherwise, the below table is based upon available industry data to assist in the glove selection process and is intended to be used as reference only.

Chemical Glove Material	Thickness (mm)	Typical Breakthrough Time (minutes)
Neoprene	1.4	30
Nitrile	0.5	60
Nitrile	0.11	7
Polyvinyl Chloride (PVC)	1.5	30
Viton Butyl	0.3	240

**Respiratory Protection:** A site-specific risk assessment should be conducted by an Occupational

Hygienist or a Safety Professional to determine the type and use of respiratory protective equipment. When a site-specific risk assessment determines that respiratory protection is required, use an approved respirator such as:

**Air purifying respirator -**

If airborne concentration limits exceed the applicable occupational exposure limit, but are below the maximum use concentration.

Vapors only: organic vapor cartridge (filter type A3 per EN 529:2005).

Vapors and particulates (including generated mists): both an organic vapor cartridge & particulate filter (AP3 filter per EN 529:2005).

Refer to respirator manufacturers to obtain service life of cartridge / filter.

**Positive pressure air-supplying respirator -**

If airborne concentration limits exceed the maximum use concentration offered from an air purifying respirator.

Refer to EN 529:2005, USA OSHA 1910.134, and/or other applicable local/regional/national/international standards for regulatory requirements.

**Occupational Exposure Limits:**

Component	Agency	Form	TWA	STEL	Ceiling	Notation
Diesel Fuel No. 2	ACGIH	Inhalable fraction and vapor	100 mg/m3	--	--	Skin total hydrocarbon
Diesel Fuel No. 2	ACGIH	Vapor	100 mg/m3	--	--	Skin
Diesel Fuel No. 2	ACGIH	Vapor and aerosol	100 mg/m3	--	--	Skin total hydrocarbon
Diesel Fuel No. 2	CVX	Vapor and aerosol	100 mg/m3	--	--	Skin total hydrocarbon
Naphthalene	ACGIH	--	10 ppm	--	--	Skin
Naphthalene	ACGIH	Vapor	10 ppm	15 ppm	--	A4 Skin
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)

**Relative Vapor Density:** >1

**Initial Boiling Point:** 175.6°C (348°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)

**Particle Characteristics:** Not applicable

**Density:** No data available

**Kinematic Viscosity:** 1.9 cSt - 4.1 cSt @ 40°C (104°F)  
**Evaporation Rate:** No data available  
**Decomposition temperature:** No data available  
**Partition coefficient n-octanol/water (logarithmic value):** 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

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur. May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Incompatibility With Other Materials:** Not applicable

**Hazardous Decomposition Products:** None known (None expected)

**SECTION 11 TOXICOLOGICAL INFORMATION**

**Information on toxicological effects**

**Serious Eye Damage/Irritation:** The material is not considered an eye irritant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Skin Corrosion/Irritation:** This material causes skin irritation. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** The material is not considered a skin sensitizer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Dermal Toxicity:** The material is not considered a dermal toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Oral Toxicity:** The material is not considered an oral toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Inhalation Toxicity:** This material is harmful if inhaled. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Acute Toxicity Estimate:** Not Determined

**Germ Cell Mutagenicity:** The material is not considered a mutagen. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Carcinogenicity:** This material may cause cancer. The product has not been tested. The statement is based on evaluation of data for similar materials or product components. Whole diesel engine exhaust has been classified as a Group 1 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 material is not considered a reproductive toxicant. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Specific Target Organ Toxicity - Single Exposure:** This material may cause drowsiness or dizziness. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Specific Target Organ Toxicity - Repeated Exposure:** This material may cause damage to organs through prolonged or repeated exposure. The product has not been tested. The statement is based on evaluation of data for similar materials or product components.

**Aspiration Hazard:** This material is considered an aspiration hazard based on the kinematic viscosity of the material.

#### **ADDITIONAL TOXICOLOGY INFORMATION:**

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 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.

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**

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

48 hour(s) EC50: 20-210 mg/l (Daphnia magna)

96 hour(s) LC50: 21-210 mg/l (Salmo gairdneri)

72 hour(s) EC50: 2.6-25 mg/l (Selenastrum capricornutum)

### **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 the properties of the individual components.

### **POTENTIAL TO BIOACCUMULATE**

Bioconcentration Factor: No data available.

Partition coefficient n-octanol/water (logarithmic value): 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

### EPCRA 311/312 CATEGORIES:

Acute toxicity (any route of exposure)

Aspiration Hazard

Carcinogenicity

Flammable (gases, aerosols, liquids, or solids)

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	05=MA RTK
01-2A=IARC Group 2A	06=NJ RTK
01-2B=IARC Group 2B	07=PA RTK
02=NTP Carcinogen	08-1=TSCA 5(e)
03=EPCRA 313	08-2=TSCA 12(b)
04=CA Proposition 65	

The following components of this material are found on the regulatory lists indicated.

Naphthalene	01-2B, 02, 03, 04, 05, 06, 07
Total PAC	03 4.81E-05 %weight

#### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AIIIC (Australia), DSL (Canada), IECSC (China), NZIoC (New Zealand), TCSI (Taiwan), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: EINECS (European Union), ENCS (Japan), KECI (Korea), PICCS (Philippines).

#### 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: 2 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 American Coatings Association (ACA) (for HMIS ratings).

#### REVISION STATEMENT:

SECTION 01 - Health Emergency information was modified.  
SECTION 15 - Regulatory Information information was added.  
SECTION 15 - Regulatory Information information was modified.

**Revision Date:** September 17, 2025

#### 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	PNOS - Particles Not Otherwise Specified

Prepared according to the 29 CFR 1910.1200 (2024) by Chevron.

**The information in this SDS is based on the knowledge, information, and belief of Chevron and its affiliates as of the publication date. It is not a quality specification, and no warranty, express or implied, is given. We assume no responsibility or liability for the results of using this material. The information presented here pertains only to the listed product. Since conditions of use are beyond our control, it is the user's responsibility to determine the conditions for safe use of this product and assess its suitability for their application. Users should seek additional guidance if necessary.**



# GASOLINE

## Danger!



**Hazard Statements:** Extremely flammable liquid and vapor. May be fatal if swallowed and enters airways – do not siphon gasoline by mouth. Do not breathe vapors. **Use only outdoors or in a well-ventilated area. No smoking. Do not eat, drink or smoke when using this product.** **Response:** In case of fire: Use dry chemical, CO<sub>2</sub>, water spray or firefighting foam to extinguish. **If swallowed:** Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. **Do NOT induce vomiting.** **Storage in approved containers.** No Supplier Info RECOVERED See SDS for further details.



# DIESEL

## Danger!



**Hazard Statements:** Extremely flammable liquid and vapor. May be fatal if swallowed and enters airways – do not siphon gasoline by mouth. Do not breathe vapors. **Use only outdoors or in a well-ventilated area. No smoking. Do not eat, drink or smoke when using this product.** **Response:** In case of fire: Use dry chemical, CO<sub>2</sub>, water spray or firefighting foam to extinguish. **If swallowed:** Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. **Do NOT induce vomiting.** **Storage in approved containers.** No Supplier Info RECOVERED See SDS for further details.





# USED OIL

## Safety Data Sheet

According To Federal Register / Vol. 89, No. 98 / Monday, May 20, 2024 / Rules And Regulations And According To The Hazardous Products Regulation (December 15, 2022).

Revision Date: 10/30/2025 Date of Issue: 10/31/1988 Supersedes Date: 01/26/2023 Version: 4.0

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Substance

**Product Name:** USED OIL

**CAS-No.:** 70514-12-4

**Synonyms:** Waste oil; Used lubricating oil; Oil and water mixture.

**SDS NO:** 81451

#### 1.2 Recommended Use and Restrictions on Use

**Use Of The Substance/Mixture** : Oil or oil and water mixture for re-refining or reprocessing. If this product is used in combination with other products, refer to the Safety Data Sheets for those products.

**Restrictions On Use** : No additional information available

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

**For Product Manufactured in U.S.A.:**

##### Manufacturer

Safety-Kleen Systems, Inc.

42 Longwater Drive

Norwell, MA 02061-9149

1-800-669-5740

[www.safety-kleen.com](http://www.safety-kleen.com)

##### Supplier (in Canada)

Safety-Kleen Canada, Inc.

25 Regan Road

Brampton, Ontario L7A 1B2

Canada

**For Product Manufactured in Canada:**

##### Manufacturer

Safety-Kleen Canada, Inc.

25 Regan Road

Brampton, Ontario L7A 1B2

Canada

[www.safety-kleen.com](http://www.safety-kleen.com)

##### Supplier (in U.S.A.)

Safety-Kleen Systems, Inc.

42 Longwater Drive

Norwell, MA 02061-9149

1-800-669-5740

#### 1.4. Emergency Telephone Number

**Emergency Number** : 1-800-468-1760

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### GHS-US/CA Classification

Acute toxicity (oral), Category 4 H302

Skin corrosion/irritation, Category 2 H315

Serious eye damage/eye irritation, Category 2 H319

Skin sensitization, Category 1 H317

Germ cell mutagenicity, Category 1 H340

Carcinogenicity, Category 1B H350

Reproductive toxicity, Category 1A H360

Specific target organ toxicity, Repeated exposure, Category 1 H372

Aspiration hazard, Category 1 H304

#### 2.2. Label Elements

##### GHS-US/CA Labeling

**Hazard Pictograms (GHS-US/CA)** :



GHS07



GHS08

**Signal Word (GHS-US/CA)** :

Danger

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**Hazard Statements (GHS-US/CA)** : H302 - Harmful if swallowed.  
H304 - May be fatal if swallowed and enters airways.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H319 - Causes serious eye irritation.  
H340 - May cause genetic defects.  
H350 - May cause cancer.  
H360 - May damage fertility or the unborn child.  
H372 - Causes damage to organs (central nervous system, lungs, kidneys) through prolonged or repeated exposure.

**Precautionary Statements (GHS-US/CA)** : P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P260 - Do not breathe mist, spray, vapors.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P280 - Wear protective clothing, protective gloves, face protection, eye protection.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or a doctor.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 - IF exposed or concerned: Get medical advice or attention.  
P321 - Specific treatment (see Section 4 of this Safety Data Sheet).  
P330 - Rinse mouth.  
P331 - Do NOT induce vomiting.  
P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.  
P337+P313 - If eye irritation persists: Get medical advice or attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P405 - Store locked up.  
P501 - Dispose of local, regional, national, territorial, provincial, and international regulations. to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

### 2.3 Hazards associated with known or reasonably anticipated uses

If this product is used in unforeseeable chemical processes and not used as intended or reasonable, the hazards listed in Section 2.3 cannot cover all chemistries. Therefore, a Process Hazard Analysis (PHA) or other hazard assessment for additional specific end uses should be performed to ensure that hazards are fully understood, and adequate safety measures are in place. See Section 10 for relevant reactivity and stability information.

### 2.4. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

### 2.5 Unknown Acute Toxicity (GHS-US/CA)

No additional information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Name : USED OIL  
CAS-No. : 70514-12-4

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Lubricating oils, used	Used petroleum	(CAS-No.) 70514-12-4	80 – 100	Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Acute 3, H402

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<b>Major Components</b>				
Water	AQUA	(CAS-No.) 7732-18-5	≤ 20	Not classified.
Mineral spirits	Petroleum spirits / White spirits / Mineral spirit / White spirit / MINERAL SPIRITS	(CAS-No.) 64475-85-0	≤ 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Muta. 1, H340 Carc. 1, H350 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Fuels, diesel	Diesel oil (petroleum) / Diesel fuel / Diesel fuel oil / Diesel fuels / Fuel, diesel / Diesel / Diesel oil / Diesel fuel/kerosene / Fuel oil, no. 1-D / Diesel (distillate) / Diesel fuel (marine) / Diesel fuel oil no. 1-D / Fuels, diesel (A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9-20 and boiling in the range of approximately 163-357°C.) / Fuel oil No. 1-D / Diesel fuel No. 1 / Fuels, diesel; Gasoil - unspecified [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C20 and boiling in the range of approximately 163°C to 357°C (325°F to 675°F).]	(CAS-No.) 68334-30-5	≤ 10	Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Carc. 1B, H350 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
Gasoline, natural	Gasoline / Light gasoline / Motor spirit / Gasoline, natural (A complex combination of hydrocarbons separated from natural gas by processes such as refrigeration or absorption. It consists predominantly of saturated aliphatic hydrocarbons having carbon numbers predominantly in the range of C4-8 and boiling in the range of approximately minus 20-120°C.) / Natural gasoline / GASOLINE	(CAS-No.) 8006-61-9	≤ 10	Flam. Liq. 1, H224 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 Repr. 2, H361 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
White mineral oil, petroleum	White mineral oil / Oils, white mineral, petroleum / White mineral oil (petroleum) / White oil / Paraffin oil / White mineral oil, petroleum (A highly refined petroleum mineral oil consisting of a complex combination of hydrocarbons obtained from the intensive treatment of a petroleum fraction with sulfuric acid and oleum, or by hydrogenation, or by a combination of hydrogenation and acid treatment. Additional washing and treating steps may be included in the processing operation. It consists of saturated hydrocarbons having carbon numbers predominantly in the range of C15-50.) / Mineral oils, petroleum / Mineral oil, white / Petroleum mineral oil / Petroleum oil / Mineral oils / Mineral oil / Petroleum paraffinic oil / Distillates (petroleum), hydrotreated middle / liquid paraffin / Paraffinic mineral oil	(CAS-No.) 8042-47-5	≤ 10	Asp. Tox. 1, H304
Kerosine, petroleum	Kerosene / Kerosine / Kerosine (petroleum) / DEODORIZED KEROSENE / Kerosine, petroleum (Straight Run, Kerosene (petroleum). A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9-16 and boiling in the range of approximately 180-300°C.) / Kerosene, jet fuel / Kerosene, jet fuels / Kerosine fraction petroleum / Lamp oil / Kerosene/Jet fuels / Kerosenes (including jet fuels) / Kerosine (petroleum); Straight run kerosine [A complex combination of hydrocarbons produced by the distillation of crude oil. It consists of hydrocarbons having carbon numbers predominantly in the range of C9 through C16 and boiling in the range of approximately 150°C to 290°C (320°F to 554°F).] / Navy Fuels JP-5 / kerosene / Fuel oil #1	(CAS-No.) 8008-20-6	≤ 10	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304

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Zinc	C.I. Pigment Black 16 / C.I. Pigment Metal 6 / Pigment Black 16 / Zinc powder - zinc dust (pyrophoric) / ZINC / Zinc powder	(CAS-No.) 7440-66-6	≤ 1.5	Pyr. Sol. 1, H250 Water-react. 1, H260 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Iron	Iron, elemental / Direct reduced Iron / Iron, reduced / Elemental iron / IRON POWDER / iron	(CAS-No.) 7439-89-6	≤ 1.5	Combustible Dust
Lead	C.I. Pigment Metal 4 / Lead metal / Lead, elemental / C.I. 77575 / Lead massive / Lead (massive and powder form)	(CAS-No.) 7439-92-1	≤ 1.5	Repr. 1A, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nickel	Nickel metal / Nickel, elemental / Nickel, metallic / Nickel, metal / C.I. 77775 / Nickel (Metallic) / Nickel catalyst, dry	(CAS-No.) 7440-02-0	≤ 1.5	Skin Sens. 1, H317 Carc. 1A, H350 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Arsenic	Arsenic, elemental / Arsenic, inorganic	(CAS-No.) 7440-38-2	≤ 1.5	Acute Tox. 2 (Oral), H300 Skin Irrit. 2, H315 Eye Dam. 1, H318 Carc. 1A, H350 Repr. 1A, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Copper	C.I. 77400 / C.I. Pigment Metal 2 / Copper, elemental / CI 77400 / Copper metal / Copper, metallic / Pigment Metal 2 / Granulated copper / copper / Copper, granulated	(CAS-No.) 7440-50-8	≤ 1.5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Combustible Dust
Chromium	Chromium metal / Chromium, elemental / Chromium, metal / Chromium, metallic / Chrome, metal / Chrome / CHROMIUM	(CAS-No.) 7440-47-3	≤ 1.5	Combustible Dust
Pyrene	Benzo[def]phenanthrene / .beta.-Pyrene / Benzo[d,e,f]phenanthrene	(CAS-No.) 129-00-0	≤ 1	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Phenanthrene	phenanthrene / PHENANTHRENE	(CAS-No.) 85-01-8	≤ 1	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Naphthalene	Naphthalene, molten / Naphthalene, crude / Naphthalenes / Moth balls	(CAS-No.) 91-20-3	≤ 1	Flam. Sol. 2, H228 Acute Tox. 4 (Oral), H302 Carc. 2, H351 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Combustible Dust
Fluoranthene	1,2-Benzacenaphthene / Benzene, 1,2-(1,8-naphthylene)- / Benzo(j,k)fluorene / Benzo(jk)fluoranthene / 1,2-(1,8-Naphthalenediyl)benzene / 1,2-(1,8-Naphthylene)benzene / Fluoroanthene / Benzo[j,k]fluorene / Benzo(j,k)fluoranthene	(CAS-No.) 206-44-0	≤ 1	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Polycyclic aromatic hydrocarbons	Aromatic hydrocarbons, polycyclic / PAHs / PAH / HAP / Hydrocarbons, aromatic, polycyclic / Poly(2+)cyclic aromatics hydrocarbons / Polynuclear aromatic hydrocarbons / Aromatic polycyclic hydrocarbons / Polycyclic aromatic hydrocarbons, congeners of	(CAS-No.) 130498-29-2	≤ 1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

\* The actual concentration of ingredient(s) is withheld as a trade secret in accordance with the Hazardous Products Regulations (HPR) SOR/2022-272 and 29 CFR 1910.1200. Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in

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volume by volume percentage (v/v%). Full text of H-statements: see section 16. *This product has a variable composition based on the composition of the individual feedstocks. The listed percentages represent expected variations in composition, but are not absolute.*

### 3.2. Mixture

Not applicable

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of 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).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Give oxygen or artificial respiration if necessary. Obtain medical attention if breathing difficulty persists.

**Skin Contact:** Immediately remove contaminated clothing. Wash affected area with soap and water for at least 15 minutes. If exposed or concerned: Get medical advice/attention.

**Eye Contact:** Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Place affected person on their side. Immediately call a POISON CENTER or doctor/physician.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** Causes damage to organs (central nervous system, lungs, kidneys) through prolonged or repeated exposure. Causes skin irritation. Causes serious eye irritation. Harmful if swallowed. Skin sensitization. May cause genetic defects. May damage fertility. May damage the unborn child. May be fatal if swallowed and enters airways. May cause cancer.

**Inhalation:** May cause drowsiness or dizziness. Prolonged exposure may cause irritation.

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

**Eye Contact:** Contact causes severe irritation with redness and swelling of the conjunctiva.

**Ingestion:** This material is harmful orally and can cause adverse health effects or death in significant amounts. Aspiration into the lungs can occur during ingestion or vomiting and may cause lung injury.

**Chronic Symptoms:** Causes damage to organs (central nervous system, lungs, kidneys) through prolonged or repeated exposure. Repeated and prolonged exposure may cause an allergic skin reaction. May cause genetic defects. May damage fertility or the unborn child. May cause cancer.

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

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>). Water may be ineffective but water should be used to keep fire-exposed container cool.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. A heavy water stream may spread burning liquid.

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

**Fire Hazard:** Not considered flammable but will burn at high temperatures.

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

**Reactivity:** Reacts with strong oxidizers.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Eliminate all ignition sources if safe to do so. Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**Protection During Firefighting:** Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon and nitrogen oxides. Metal oxides. Chlorine oxides. Phosgene.

**Other Information:** No additional information available.

### 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

**General Measures:** Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. Spilled product presents a slipping hazard.

#### 6.1.1. For Non-Emergency Personnel

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

**Emergency Procedures:** Evacuate unnecessary personnel. Stop leak if safe to do so.

#### 6.1.2. For Emergency Personnel

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

**Emergency Procedures:** Ventilate area. 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 Materials for Containment and Cleaning Up

**For Containment:** As an immediate precautionary measure, isolate spill or leak area in all directions. 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. Transfer spilled material to a suitable container for disposal. For larger spills, dike far ahead of spill for later disposal. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Avoid generating mists.

**Precautions for Safe Handling:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist, spray, or vapors. Do not get in eyes, on skin, or on clothing. Handle empty containers with care because they may still present a hazard. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

**Handling Temperature:** No temperature range given.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

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

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up/in a secure area. Store in a well-ventilated place. Keep container tightly closed.

**Incompatible Materials:** Alkalis. Reducing agents. Halogens. reactive metals (Al, K, Zn ...). Strong acids, strong bases, strong oxidizers.

**Storage Temperature:** No temperature range given.

### 7.3. Specific End Use(s)

Oil or oil and water mixture for re-refining or reprocessing. If this product is used in combination with other products, refer to the Safety Data Sheet for those products.

## 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), OSHA (PEL), or Canadian provincial governments.

Mineral spirits (64475-85-0)		
Ontario	OEL TWAEV	525 mg/m <sup>3</sup>
Fuels, diesel (68334-30-5)		
USA ACGIH	ACGIH® TLV® TWA	100 mg/m <sup>3</sup> (inhalable fraction and vapor)
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall

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		exposure by the cutaneous route
<b>Alberta</b>	OEL TWA	100 mg/m <sup>3</sup> (The source also uses CAS 77650-28-3 for this substance)
<b>British Columbia</b>	OEL TWA	100 mg/m <sup>3</sup> (inhalable; inhalable aerosol and vapor (Diesel fuel))
<b>Manitoba</b>	OEL TWA	100 mg/m <sup>3</sup> (inhalable fraction and vapor)
<b>New Brunswick</b>	OEL TWA	100 mg/m <sup>3</sup> (inhalable fraction and vapor)
<b>Newfoundland &amp; Labrador</b>	OEL TWA	100 mg/m <sup>3</sup> (inhalable fraction and vapor)
<b>Nova Scotia</b>	OEL TWA	100 mg/m <sup>3</sup> (inhalable fraction and vapor)
<b>Nunavut</b>	OEL STEL	150 mg/m <sup>3</sup> (vapor (Diesel fuel))
<b>Nunavut</b>	OEL TWA	100 mg/m <sup>3</sup> (vapor (Diesel fuel))
<b>Northwest Territories</b>	OEL STEL	150 mg/m <sup>3</sup> (The source also uses CAS 77650-28-3 for the substance.-vapor (Diesel fuel))
<b>Northwest Territories</b>	OEL TWA	100 mg/m <sup>3</sup> (The source also uses CAS 77650-28-3 for the substance.-vapor (Diesel fuel))
<b>Ontario</b>	OEL TWAEV	100 mg/m <sup>3</sup> (inhalable fraction and vapor (Diesel fuel))
<b>Prince Edward Island</b>	OEL TWA	100 mg/m <sup>3</sup> (inhalable fraction and vapor)
<b>Québec</b>	VEMP (OEL TWAEV)	100 mg/m <sup>3</sup> (total hydrocarbons-inhalable fraction and vapor)
<b>Saskatchewan</b>	OEL STEL	150 mg/m <sup>3</sup> (The source also uses CAS 77650-28-3 for the substance.-vapor (Diesel fuel))
<b>Saskatchewan</b>	OEL TWA	100 mg/m <sup>3</sup> (The source also uses CAS 77650-28-3 for the substance.-vapor (Diesel fuel))
<b>Gasoline, natural (8006-61-9)</b>		
<b>Québec</b>	VECD (OEL STEV)	1480 mg/m <sup>3</sup> (Gasoline)
<b>Québec</b>	VECD (OEL STEV)	500 ppm (Gasoline)
<b>Québec</b>	VEMP (OEL TWAEV)	890 mg/m <sup>3</sup> (Gasoline)
<b>Québec</b>	VEMP (OEL TWAEV)	300 ppm (Gasoline)
<b>Lead (7439-92-1)</b>		
<b>USA ACGIH</b>	ACGIH® TLV® TWA	0.05 mg/m <sup>3</sup>
<b>USA ACGIH</b>	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
<b>USA ACGIH</b>	BEI	200 µg/l Parameter: Lead - Medium: blood - Sampling time: not critical (Note: Persons applying this BEI are encouraged to counsel female workers of child-bearing age about the risk of delivering a child with a PbB (lead in blood level) over the current CDC reference value.)
<b>USA OSHA</b>	OSHA PEL TWA	50 µg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL TWA	0.05 mg/m <sup>3</sup>
<b>USA IDLH</b>	IDLH	100 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Nova Scotia</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL STEL	0.15 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL	0.15 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Ontario</b>	OEL TWAEV	0.05 mg/m <sup>3</sup> (designated substances regulation) 0.05 mg/m <sup>3</sup> (applies to workplaces to which the designated

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		substances regulation does not apply)
<b>Prince Edward Island</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (OEL TWAEV)	0.05 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL	0.15 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL	0.45 mg/m <sup>3</sup> (dust and fume)
<b>Yukon</b>	OEL TWA	0.15 mg/m <sup>3</sup> (dust and fume)
<b>Nickel (7440-02-0)</b>		
<b>USA ACGIH</b>	ACGIH® TLV® TWA	1.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>USA ACGIH</b>	ACGIH chemical category	Not Suspected as a Human Carcinogen
<b>USA ACGIH</b>	BEI	5 µg/l Parameter: Nickel - Medium: urine - Sampling time: post-shift at end of workweek (background)
<b>USA OSHA</b>	OSHA PEL TWA	1 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL TWA	0.015 mg/m <sup>3</sup>
<b>USA IDLH</b>	IDLH	10 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA	1.5 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA	0.05 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA	1.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>New Brunswick</b>	OEL TWA	1.5 mg/m <sup>3</sup> (inhalable fraction)
<b>Newfoundland &amp; Labrador</b>	OEL TWA	1.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Nova Scotia</b>	OEL TWA	1.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Nunavut</b>	OEL STEL	3 mg/m <sup>3</sup> (inhalable fraction)
<b>Nunavut</b>	OEL TWA	1.5 mg/m <sup>3</sup> (inhalable fraction)
<b>Northwest Territories</b>	OEL STEL	3 mg/m <sup>3</sup> (inhalable fraction)
<b>Northwest Territories</b>	OEL TWA	1.5 mg/m <sup>3</sup> (inhalable fraction)
<b>Ontario</b>	OEL TWAEV	1 mg/m <sup>3</sup> (inhalable fraction)
<b>Prince Edward Island</b>	OEL TWA	1.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Québec</b>	VEMP (OEL TWAEV)	1.5 mg/m <sup>3</sup> (inhalable dust)
<b>Saskatchewan</b>	OEL STEL	3 mg/m <sup>3</sup> (inhalable fraction)
<b>Saskatchewan</b>	OEL TWA	1.5 mg/m <sup>3</sup> (inhalable fraction)
<b>Yukon</b>	OEL STEL	3 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA	1 mg/m <sup>3</sup>
<b>Arsenic (7440-38-2)</b>		
<b>USA ACGIH</b>	ACGIH® TLV® TWA	0.01 mg/m <sup>3</sup>
<b>USA ACGIH</b>	ACGIH chemical category	Confirmed Human Carcinogen
<b>USA ACGIH</b>	BEI	15 µg/g Kreatinin Parameter: inorganic arsenic plus methylated metabolites in urine - Medium: urine - Sampling time: end of shift at end of workweek (population based)
<b>USA NIOSH</b>	NIOSH REL C	0.002 mg/m <sup>3</sup>
<b>USA IDLH</b>	IDLH	5 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>Manitoba</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>New Brunswick</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>Nova Scotia</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL STEL	0.03 mg/m <sup>3</sup>
<b>Nunavut</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL STEL	0.03 mg/m <sup>3</sup>
<b>Northwest Territories</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>Ontario</b>	OEL TWAEV	0.05 mg/m <sup>3</sup> (designated substances regulation)

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<b>Ontario</b>	OEL TWAEV	0.01 mg/m <sup>3</sup> (designated substances regulation) 0.01 mg/m <sup>3</sup> (applies to workplaces to which the designated substances regulation does not apply)
<b>Prince Edward Island</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>Québec</b>	VEMP (OEL TWAEV)	0.01 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL STEL	0.03 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA	0.01 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL	0.5 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA	0.5 mg/m <sup>3</sup>
<b>Copper (7440-50-8)</b>		
<b>USA ACGIH</b>	ACGIH® TLV® TWA	0.2 mg/m <sup>3</sup> (fume)
<b>USA OSHA</b>	OSHA PEL TWA	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>USA NIOSH</b>	NIOSH REL TWA	1 mg/m <sup>3</sup> (dust and mist) 0.1 mg/m <sup>3</sup> (fume)
<b>USA IDLH</b>	IDLH	100 mg/m <sup>3</sup> (dust, fume and mist)
<b>Alberta</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>British Columbia</b>	OEL TWA	1 mg/m <sup>3</sup> (dust and mist) 0.2 mg/m <sup>3</sup> (fume)
<b>Manitoba</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume)
<b>New Brunswick</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume)
<b>Newfoundland &amp; Labrador</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume)
<b>Nova Scotia</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume)
<b>Nunavut</b>	OEL STEL	3 mg/m <sup>3</sup> (dust and mist) 0.6 mg/m <sup>3</sup> (fume)
<b>Nunavut</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Northwest Territories</b>	OEL STEL	3 mg/m <sup>3</sup> (dust and mist) 0.6 mg/m <sup>3</sup> (fume)
<b>Northwest Territories</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Ontario</b>	OEL TWAEV	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Prince Edward Island</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume)
<b>Québec</b>	VEMP (OEL TWAEV)	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Saskatchewan</b>	OEL STEL	0.6 mg/m <sup>3</sup> (fume) 3 mg/m <sup>3</sup> (dust and mist)
<b>Saskatchewan</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Yukon</b>	OEL STEL	0.2 mg/m <sup>3</sup> (fume) 2 mg/m <sup>3</sup> (dust and mist)
<b>Yukon</b>	OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Chromium (7440-47-3)</b>		
<b>USA ACGIH</b>	ACGIH® TLV® TWA	0.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>USA ACGIH</b>	BEI	0.7 µg/l Parameter: total Chromium - Medium: urine - Sampling time: end of shift at end of workweek (population based)
<b>USA OSHA</b>	OSHA PEL TWA	1 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL TWA	0.5 mg/m <sup>3</sup>

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<b>USA IDLH</b>	IDLH	250 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA	0.5 mg/m <sup>3</sup>
<b>British Columbia</b>	OEL TWA	0.5 mg/m <sup>3</sup> (inhalable)
<b>Manitoba</b>	OEL TWA	0.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>New Brunswick</b>	OEL TWA	0.5 mg/m <sup>3</sup>
<b>Newfoundland &amp; Labrador</b>	OEL TWA	0.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Nova Scotia</b>	OEL TWA	0.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Nunavut</b>	OEL STEL	1.5 mg/m <sup>3</sup> (metal)
<b>Nunavut</b>	OEL TWA	0.5 mg/m <sup>3</sup> (metal)
<b>Northwest Territories</b>	OEL STEL	1.5 mg/m <sup>3</sup> (metal)
<b>Northwest Territories</b>	OEL TWA	0.5 mg/m <sup>3</sup> (metal)
<b>Ontario</b>	OEL TWAEV	0.5 mg/m <sup>3</sup>
<b>Prince Edward Island</b>	OEL TWA	0.5 mg/m <sup>3</sup> (inhalable particulate matter)
<b>Québec</b>	VEMP (OEL TWAEV)	0.5 mg/m <sup>3</sup> (inhalable aerosol fraction)
<b>Saskatchewan</b>	OEL STEL	1.5 mg/m <sup>3</sup>
<b>Saskatchewan</b>	OEL TWA	0.5 mg/m <sup>3</sup>
<b>Yukon</b>	OEL STEL	3 mg/m <sup>3</sup>
<b>Yukon</b>	OEL TWA	0.1 mg/m <sup>3</sup>
<b>Pyrene (129-00-0)</b>		
<b>USA OSHA</b>	OSHA PEL TWA	0.2 mg/m <sup>3</sup> (Coal tar pitch volatiles)
<b>Phenanthrene (85-01-8)</b>		
<b>USA OSHA</b>	OSHA PEL TWA	0.2 mg/m <sup>3</sup> (Coal tar pitch volatiles)
<b>Naphthalene (91-20-3)</b>		
<b>USA ACGIH</b>	ACGIH® TLV® TWA	10 ppm
<b>USA ACGIH</b>	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route
<b>USA ACGIH</b>	BEI	Parameter: 1-Naphthol with hydrolysis plus 2-Naphthol with hydrolysis - Sampling time: end of shift (nonquantitative, nonspecific)
<b>USA OSHA</b>	OSHA PEL TWA	50 mg/m <sup>3</sup>
<b>USA OSHA</b>	OSHA PEL TWA	10 ppm
<b>USA NIOSH</b>	NIOSH REL TWA	50 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL TWA	10 ppm
<b>USA NIOSH</b>	NIOSH REL STEL	75 mg/m <sup>3</sup>
<b>USA NIOSH</b>	NIOSH REL STEL	15 ppm
<b>USA IDLH</b>	IDLH	250 ppm
<b>Alberta</b>	OEL STEL	79 mg/m <sup>3</sup>
<b>Alberta</b>	OEL STEL	15 ppm
<b>Alberta</b>	OEL TWA	52 mg/m <sup>3</sup>
<b>Alberta</b>	OEL TWA	10 ppm
<b>British Columbia</b>	OEL TWA	10 ppm
<b>Manitoba</b>	OEL TWA	10 ppm
<b>New Brunswick</b>	OEL TWA	10 ppm
<b>Newfoundland &amp; Labrador</b>	OEL TWA	10 ppm
<b>Nova Scotia</b>	OEL TWA	10 ppm
<b>Nunavut</b>	OEL STEL	15 ppm
<b>Nunavut</b>	OEL TWA	10 ppm
<b>Northwest Territories</b>	OEL STEL	15 ppm
<b>Northwest Territories</b>	OEL TWA	10 ppm
<b>Ontario</b>	OEL TWAEV	10 ppm

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Prince Edward Island	OEL TWA	10 ppm
Québec	VEMP (OEL TWAEV)	10 ppm
Saskatchewan	OEL STEL	15 ppm
Saskatchewan	OEL TWA	10 ppm
Yukon	OEL STEL	75 mg/m <sup>3</sup>
Yukon	OEL STEL	15 ppm
Yukon	OEL TWA	50 mg/m <sup>3</sup>
Yukon	OEL TWA	10 ppm
<b>Polycyclic aromatic hydrocarbons (130498-29-2)</b>		
USA ACGIH	BEI	2.5 µg/l Parameter: 1-Hydroxypyrene with hydrolysis - Medium: urine - Sampling time: end of shift at end of workweek (background) Parameter: 3-Hydroxybenzo(a)pyrene with hydrolysis - Medium: urine - Sampling time: end of shift at end of workweek (nonquantitative)
Saskatchewan	OEL STEL	0.6 mg/m <sup>3</sup> (particulate)
Saskatchewan	OEL TWA	0.2 mg/m <sup>3</sup> (particulate)
<b>Kerosene, petroleum (8008-20-6)</b>		
USA ACGIH	ACGIH® TLV® TWA	200 mg/m <sup>3</sup> (application restricted to conditions in which there are negligible aerosol exposures-total Hydrocarbon vapor (Kerosene/Jet fuels))
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route
USA NIOSH	NIOSH REL TWA	100 mg/m <sup>3</sup>
Alberta	OEL TWA	200 mg/m <sup>3</sup>
British Columbia	OEL TWA	200 mg/m <sup>3</sup> (application restricted to conditions in which there are negligible aerosol exposures)
Manitoba	OEL TWA	200 mg/m <sup>3</sup> (application restricted to conditions in which there are negligible aerosol exposures-total Hydrocarbon vapor (Kerosene/Jet fuels))
New Brunswick	OEL TWA	200 mg/m <sup>3</sup> (application restricted to conditions in which there are negligible aerosol exposures-total Hydrocarbon vapor)
Newfoundland & Labrador	OEL TWA	200 mg/m <sup>3</sup> (application restricted to conditions in which there are negligible aerosol exposures-total Hydrocarbon vapor (Kerosene/Jet fuels))
Nova Scotia	OEL TWA	200 mg/m <sup>3</sup> (application restricted to conditions in which there are negligible aerosol exposures-total Hydrocarbon vapor (Kerosene/Jet fuels))
Nunavut	OEL STEL	250 mg/m <sup>3</sup> (Kerosene/Jet fuels)
Nunavut	OEL TWA	200 mg/m <sup>3</sup> (Kerosene/Jet fuels)
Northwest Territories	OEL STEL	250 mg/m <sup>3</sup> (Kerosene/Jet fuels)
Northwest Territories	OEL TWA	200 mg/m <sup>3</sup> (Kerosene/Jet fuels)
Ontario	OEL TWAEV	200 mg/m <sup>3</sup> (restricted to conditions where there is negligible aerosol exposure (Kerosene/Jet fuels))
Prince Edward Island	OEL TWA	200 mg/m <sup>3</sup> (application restricted to conditions in which there are negligible aerosol exposures-total Hydrocarbon vapor (Kerosene/Jet fuels))
Québec	VEMP (OEL TWAEV)	200 mg/m <sup>3</sup> (Kerosene)
Saskatchewan	OEL STEL	250 mg/m <sup>3</sup>
Saskatchewan	OEL TWA	200 mg/m <sup>3</sup>

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### 8.2. Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers 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. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

**Personal Protective Equipment:** Gloves. Protective clothing. Protective goggles or glasses. Face shield. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

**Hand Protection:** Wear protective gloves.

**Eye and Face Protection:** Chemical goggles or safety glasses. Faceshield as determined by task.

**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. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Thermal Hazard Protection:** If material is hot, wear thermally resistant protective gloves.

**Environmental Exposure Controls:** Avoid unnecessary release 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
Color	: Black, Viscous, Thick
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Evaporation Rate	: < 1 [Butyl acetate = 1]
Melting Point	: No data available
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: > 93.4 °C (200.12 °F)
Auto-ignition Temperature	: No data available
Decomposition Temperature	: No data available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: No data available
Upper Flammable Limit	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: > 1 [Kerosene air = 1]
Relative Density	: 0.8 – 1 [Water = 1]
Specific Gravity	: 0.8 - 1.0 @ 60°F (15.6°C)
Solubility	: Slightly soluble in water.
Partition Coefficient: N-Octanol/Water	: No data available
Viscosity, Kinematic	: Not available
Particle characteristics	: No data available
Viscosity	: Not available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity:

Reacts with strong oxidizers.

### 10.2. Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

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### 10.3. Possibility of Hazardous Reactions, Including those Associated with Foreseeable Emergencies:

Hazardous polymerization will not occur.

### 10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, and incompatible materials.

### 10.5. Incompatible Materials:

Alkalis. Reducing agents. Halogens. reactive metals (Al, K, Zn ...). Strong acids, strong bases, strong oxidizers.

### 10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Nitrogen oxides. Metal oxides. Carbon oxides (CO, CO<sub>2</sub>). Chlorine oxides. Phosgene.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

**Likely routes of exposure:** Dermal, Eye Contact, Inhalation, Oral.

**Acute Toxicity (Oral):** Harmful if swallowed.

**Acute Toxicity (Dermal):** Not classified.

**Acute Toxicity (Inhalation):** Not classified.

#### LD50 and LC50 Data:

USED OIL (70514-12-4)	
ATE US/CA (oral)	960.09 mg/kg body weight

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

**Eye Damage/Irritation:** Causes serious eye irritation.

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** May cause genetic defects.

**Carcinogenicity:** May cause cancer.

**Specific Target Organ Toxicity (Repeated Exposure):** Causes damage to organs (central nervous system, lungs, kidneys) through prolonged or repeated exposure.

**Reproductive Toxicity:** May damage fertility or the unborn child.

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

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

**Symptoms/Injuries After Inhalation:** May cause drowsiness or dizziness. Prolonged exposure may cause irritation.

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

**Symptoms/Injuries After Eye Contact:** Contact causes severe irritation with redness and swelling of the conjunctiva.

**Symptoms/Injuries After Ingestion:** This material is harmful orally and can cause adverse health effects or death in significant amounts. Aspiration into the lungs can occur during ingestion or vomiting and may cause lung injury.

**Chronic Symptoms:** Causes damage to organs (central nervous system, lungs, kidneys) through prolonged or repeated exposure.

Repeated and prolonged exposure may cause an allergic skin reaction. May cause genetic defects. May damage fertility or the unborn child. May cause cancer.

### 11.2. Information on Toxicological Effects - Ingredient(s)

#### LD50 and LC50 Data:

Lubricating oils, used (70514-12-4)	
LD50 Oral Rat	> 2000 mg/kg (Source: IUCLID)
LD50 Dermal Rabbit	> 5000 mg/kg (Source: ECHA_API)
LC50 Inhalation Rat	> 5.53 mg/l/4h
Water (7732-18-5)	
LD50 Oral Rat	> 90 ml/kg (Source: FOOD_JOURN)
Mineral spirits (64475-85-0)	
LD50 Oral Rat	> 34600 mg/kg (Source: NLM_CIP)
LC50 Inhalation Rat	> 21400 mg/m <sup>3</sup> (Exposure time: 4 h Source: NLM_CIP)
Fuels, diesel (68334-30-5)	
LD50 Oral Rat	7500 mg/kg (Source: NLM_CIP)
LD50 Dermal Rabbit	> 2000 mg/kg (Source: NLM_CIP)
LC50 Inhalation Rat	4.6 mg/l/4h

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<b>Gasoline, natural (8006-61-9)</b>	
LD50 Oral Rat	14063 mg/kg (Source: NLM_HSDB)
LC50 Inhalation Rat	300 g/m <sup>3</sup> (Exposure time: 5 min Source: NLM_CIP)
<b>Iron (7439-89-6)</b>	
LD50 Oral Rat	30 g/kg (Source: NLM_CIP)
<b>Nickel (7440-02-0)</b>	
LD50 Oral Rat	> 9000 mg/kg (Source: EU_RAR)
LC50 Inhalation Rat	> 10.2 mg/l (Exposure time: 1 h Source: EU_RAR)
<b>Arsenic (7440-38-2)</b>	
LD50 Oral Rat	15 mg/kg (Source: NZ_CCID)
<b>Copper (7440-50-8)</b>	
LC50 Inhalation Rat	> 5.11 mg/l/4h
<b>Pyrene (129-00-0)</b>	
LD50 Oral Rat	2700 mg/kg (Source: NLM_CIP)
<b>Phenanthrene (85-01-8)</b>	
LD50 Oral Rat	≈ 700 mg/kg
ATE US/CA (oral)	500.00 mg/kg body weight
<b>Naphthalene (91-20-3)</b>	
LD50 Oral Rat	1110 mg/kg (Source: JAPAN_GHS)
<b>Fluoranthene (206-44-0)</b>	
LD50 Oral Rat	2 g/kg (Source: NLM_CIP)
LD50 Dermal Rabbit	3180 mg/kg (Source: NLM_HSDB)
<b>Polycyclic aromatic hydrocarbons (130498-29-2)</b>	
ATE US/CA (oral)	500.00 mg/kg body weight
<b>White mineral oil, petroleum (8042-47-5)</b>	
LD50 Oral Rat	> 5000 mg/kg (Source: IUCLID)
<b>Kerosine, petroleum (8008-20-6)</b>	
LD50 Oral Rat	> 5000 mg/kg (Source: CHEMVIEW)
LD50 Dermal Rabbit	> 2000 mg/kg (Source: CHEMVIEW)
LC50 Inhalation Rat	> 5.28 mg/l/4h
<b>Fuels, diesel (68334-30-5)</b>	
IARC Group	2B
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
<b>Lead (7439-92-1)</b>	
IARC Group	2A
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
<b>Nickel (7440-02-0)</b>	
IARC Group	2B
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
<b>Arsenic (7440-38-2)</b>	
IARC Group	1
National Toxicology Program (NTP) Status	Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
<b>Chromium (7440-47-3)</b>	
IARC Group	3
<b>Pyrene (129-00-0)</b>	
IARC Group	3

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<b>Phenanthrene (85-01-8)</b>	
IARC Group	3
<b>Naphthalene (91-20-3)</b>	
IARC Group	2B
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen, Evidence of Carcinogenicity.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.
<b>Fluoranthene (206-44-0)</b>	
IARC Group	3

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

No additional information available

<b>Lubricating oils, used (70514-12-4)</b>	
LC50 Fish 1	79.6 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [semi-static] Source: IUCLID)
EC50 - Crustacea [1]	> 22500 mg/l (Exposure time: 48 h - Species: Artemia salina)
<b>Fuels, diesel (68334-30-5)</b>	
LC50 Fish 1	35 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: IUCLID)
<b>Gasoline, natural (8006-61-9)</b>	
LC50 Fish 1	56 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
<b>Zinc (7440-66-6)</b>	
LC50 Fish 1	2.16 – 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
EC50 - Crustacea [1]	0.139 – 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	0.211 – 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static] Source: EPA)
<b>Lead (7439-92-1)</b>	
LC50 Fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static] Source: EPA)
EC50 - Crustacea [1]	600 µg/l (Exposure time: 48 h - Species: water flea)
LC50 Fish 2	1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)
<b>Nickel (7440-02-0)</b>	
LC50 Fish 1	> 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio Source: IUCLID)
EC50 - Crustacea [1]	> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	1.3 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static] Source: EPA)
EC50 - Crustacea [2]	1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
NOEC Chronic Fish	40000 ng/l
<b>Arsenic (7440-38-2)</b>	
LC50 Fish 1	10.3 mg/l
EC50 - Crustacea [1]	1.5 mg/l
LC50 Fish 2	12.6 mg/l
NOEC Chronic Fish	0.234 mg/l
NOEC Chronic Crustacea	0.088 mg/l
<b>Copper (7440-50-8)</b>	
LC50 Fish 1	0.0068 – 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas Source: EPA)
EC50 - Crustacea [1]	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 Fish 2	< 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
NOEC Chronic Fish	0.0116 mg/l
NOEC Chronic Crustacea	0.0078 mg/l
<b>Pyrene (129-00-0)</b>	
EC50 - Crustacea [1]	1.8 mg/l (Exposure time: 48 h - Species: water flea)
EC50 - Crustacea [2]	1.38 µg/l
NOEC Chronic Crustacea	0.0021 mg/l

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Naphthalene (91-20-3)	
LC50 Fish 1	5.74 – 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
EC50 - Crustacea [1]	2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	1.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)
EC50 - Crustacea [2]	1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])
ErC50 algae	0.41 mg/l
White mineral oil, petroleum (8042-47-5)	
LC50 Fish 1	> 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

### 12.2. Persistence and Degradability

USED OIL (70514-12-4)	
Persistence and Degradability	Not established.

### 12.3. Bioaccumulative Potential

USED OIL (70514-12-4)	
Bioaccumulative Potential	Not established.

Gasoline, natural (8006-61-9)	
Partition coefficient n-octanol/water (Log Pow)	2.1 – 6

Pyrene (129-00-0)	
Partition coefficient n-octanol/water (Log Pow)	5.43 (at 30 °C (at pH >=5-<=8)

Phenanthrene (85-01-8)	
Partition coefficient n-octanol/water (Log Pow)	4.5

Naphthalene (91-20-3)	
BCF Fish 1	36.5 – 168 (whole body w.w.)
Partition coefficient n-octanol/water (Log Pow)	3.4 (at 25 °C (at pH 7-7.5)

Fluoranthene (206-44-0)	
Partition coefficient n-octanol/water (Log Pow)	5.1

White mineral oil, petroleum (8042-47-5)	
Partition coefficient n-octanol/water (Log Pow)	> 6

### 12.4. Mobility in Soil

USED OIL (70514-12-4)	
Ecology - Soil	Adsorbs into the soil. Product partially leaches if exposed to water.

### 12.5. Other Adverse Effects

**Other Adverse Effects:** Hydrocarbon film may develop and spread on the surface of water. Some low weight components will become volatile, while others will adsorb to sediment particles. Both of these scenarios represent hazards to the aquatic ecosystem.

**Other Information:** Avoid unnecessary release into the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste Treatment Methods:** Material should be recycled if possible. Incinerate if recycling is not feasible.

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

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Additional Information:** Recycle the material as far as possible.

**Ecology - Waste Materials:** Avoid unnecessary release into the environment.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

### 14.1. In Accordance with DOT

Flashpoint greater than or equal to 100°F and less than 200°F:

### 14.2. In Accordance with IMDG

Not regulated for transport

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## 14.3. In Accordance with IATA

Not regulated for transport

## 14.4. In Accordance with TDG

Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1. US Federal Regulations

<b>USED OIL (70514-12-4)</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Health hazard - Acute toxicity (any route of exposure) Health hazard - Aspiration hazard Health hazard - Carcinogenicity Health hazard - Germ cell mutagenicity Health hazard - Reproductive toxicity Health hazard - Respiratory or skin sensitization Health hazard - Serious eye damage or eye irritation Health hazard - Skin corrosion or Irritation Health hazard - Specific target organ toxicity (single or repeated exposure)
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
<b>EPA TSCA Regulatory Flag</b>	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
<b>Fuels, diesel (68334-30-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
<b>Gasoline, natural (8006-61-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
<b>EPA TSCA Regulatory Flag</b>	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
<b>Zinc (7440-66-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	454 kg no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
<b>SARA Section 313 - Emission Reporting</b>	1 % (dust or fume only)
<b>Iron (7439-89-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
<b>Lead (7439-92-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	10 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
<b>SARA Section 313 - Emission Reporting</b>	(not eligible for the de minimis exemption)
<b>Nickel (7440-02-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	100 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
<b>SARA Section 313 - Emission Reporting</b>	0.1 %
<b>Arsenic (7440-38-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	1 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
<b>SARA Section 313 - Emission Reporting</b>	0.1 %

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<b>Copper (7440-50-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	5000 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
<b>SARA Section 313 - Emission Reporting</b>	1 %
<b>Chromium (7440-47-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	5000 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
<b>SARA Section 313 - Emission Reporting</b>	1 %
<b>Pyrene (129-00-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on the United States SARA Section 302	
<b>CERCLA RQ</b>	5000 lb
<b>SARA Section 302 Threshold Planning Quantity (TPQ)</b>	1000 – 10000 lb
<b>Phenanthrene (85-01-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	5000 lb
<b>SARA Section 313 - Emission Reporting</b>	1 %
<b>Naphthalene (91-20-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	100 lb
<b>SARA Section 313 - Emission Reporting</b>	0.1 %
<b>Fluoranthene (206-44-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Subject to reporting requirements of United States SARA Section 313	
<b>CERCLA RQ</b>	100 lb
<b>SARA Section 313 - Emission Reporting</b>	(not eligible for the de minimis exemption)
<b>White mineral oil, petroleum (8042-47-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
<b>Kerosine, petroleum (8008-20-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	

### 15.2. US State Regulations

#### California Proposition 65

 **WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Chemical Name (CAS No.)	Carcinogenicity	Developmental Toxicity	Female Reproductive Toxicity	Male Reproductive Toxicity
Lead (7439-92-1)	X	X	X	X
Nickel (7440-02-0)	X			
Naphthalene (91-20-3)	X			

#### Mineral spirits (64475-85-0)

U.S. - New Jersey - Right to Know Hazardous Substance List

#### Fuels, diesel (68334-30-5)

U.S. - Pennsylvania - RTK (Right to Know) List

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<b>Gasoline, natural (8006-61-9)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Massachusetts - Right To Know List
<b>Zinc (7440-66-6)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Lead (7439-92-1)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Nickel (7440-02-0)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Arsenic (7440-38-2)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Copper (7440-50-8)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Chromium (7440-47-3)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Pyrene (129-00-0)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Phenanthrene (85-01-8)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Naphthalene (91-20-3)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

# USED OIL

## Safety Data Sheet

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<b>Fluoranthene (206-44-0)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Polycyclic aromatic hydrocarbons (130498-29-2)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
<b>Kerosine, petroleum (8008-20-6)</b>
U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Massachusetts - Right To Know List

### 15.3. Canadian Regulations

<b>Lubricating oils, used (70514-12-4)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Water (7732-18-5)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Mineral spirits (64475-85-0)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Fuels, diesel (68334-30-5)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Gasoline, natural (8006-61-9)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Zinc (7440-66-6)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Iron (7439-89-6)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Lead (7439-92-1)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Nickel (7440-02-0)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Arsenic (7440-38-2)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Copper (7440-50-8)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Chromium (7440-47-3)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Pyrene (129-00-0)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Phenanthrene (85-01-8)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Naphthalene (91-20-3)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Fluoranthene (206-44-0)</b>
Listed on the Canadian NDSL (Non-Domestic Substances List)
<b>White mineral oil, petroleum (8042-47-5)</b>
Listed on the Canadian DSL (Domestic Substances List)

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**Kerosine, petroleum (8008-20-6)**

Listed on the Canadian DSL (Domestic Substances List)

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

- Date of Preparation or Latest Revision** : 11/11/2025
- Indication of Changes** : Updating of document to new North American standards. Changes to formulation. Update to all sections based on formulation changes..
- Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2022-272.

GHS Full Text Phrases:	
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H227	Combustible liquid
H228	Flammable solid
H250	Catches fire spontaneously if exposed to air
H260	In contact with water releases flammable gases which may ignite spontaneously
H300	Fatal if swallowed
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H340	May cause genetic defects.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

- NFPA Health Hazard** : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA Fire Hazard** : 1 - Materials that must be preheated before ignition can occur.
- NFPA Reactivity Hazard** : 0 - Material that in themselves are normally stable, even under fire conditions.



# USED OIL

## Safety Data Sheet

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### Glossary of Data Source Abbreviations

ATSDR: Agency for Toxic Substances and Disease Registry (U.S. Department of Health and Human Services)

AU\_WES: Australia WES

CHEMVIEW: ChemView (U.S. Environmental Protection Agency)

EC\_RAR: European Commission Renewal Assessment Report

EC\_SCOEL: European Commission Scientific Committee on Occupational Exposure Limits

ECETOC: European Centre for Ecotoxicology and Toxicology of Chemicals Reports

ECHA\_API: European Chemicals Agency API

ECHA\_RAC: ECHA Committee for Risk Assessment

EFSA: European Food Safety Authority

EPA: U.S. Environmental Protection Agency

EPA\_AEGL: Acute Exposure Guideline Levels (U.S. Environmental Protection Agency)

EPA\_FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act Reregistration Eligibility Decision (U.S. Environmental Protection Agency)

EPA\_HPVC: High Production Volume Chemicals (U.S. Environmental Protection Agency)

EPA\_TRED: Risk Assessment for Tolerance Reassessment Eligibility Decision (U.S. Environmental Protection Agency)

EU\_CLH: European Union Harmonised Classification and Labelling Proposal

EU\_RAR: European Union Risk Assessment Report

FOOD\_JOURN: Food Research Journal (1956)

IARC: The International Agency for Research on Cancer

IDLH: National Institute for Occupational Health and Safety Immediately Dangerous to Life or Health Value Profiles

IUCLID: International Uniform Chemical Information Database

JAPAN\_GHS: Japan GHS Basis for Classification Data

JP\_J-CHECK: Japan J-Check

KR\_NIER: South Korea National Institute of Environmental Research Evaluations

NICNAS: Australia National Industrial Chemicals Notification and Assessment Scheme

NIOSH: National Institute for Occupational Health and Safety (U.S. Department of Health and Human Services)

NLM\_CIP: National Library of Medicine ChemID plus database

NLM\_HSDB: National Library of Medicine Hazardous Substance Data Bank

NLM\_PUBMED: National Library of Medicine PubMed database

NTP: National Toxicology Program

NZ\_CCID: New Zealand Chemical Classification and Information Database

OECD\_EHSP: Environment, Health, and Safety Publication (Organisation for Economic Co-operation and Development)

OECD\_SIDS: Screening Information Data Sets (Organisation for Economic Co-operation and Development)

WHO: World Health Organization

*The information contained herein is correct to the best of our knowledge, information, and belief and is designed only as guidance for the handling, use, processing, storage, transportation, disposal, and release of the product. User assumes all risks incident to use of this product and shall determine the quality and suitability of the product for its use. Supplier offers no warranty, express or implied, whatsoever, including warranties of merchantability or fitness for a particular purpose or otherwise, and specifically disclaims any and all liability for incidental, consequential, or other damages arising out the use or misuse of the product. The information provided relates only to the specific material provided and may not be valid if used in combination with any other materials or process, unless specified herein.*

NA GHS SDS 2024 (Can, US)

# USED OIL

## Danger!



**Hazard Statement(s)** Harmful if swallowed. Causes skin & eye irritation. May cause or breathing difficulties if inhaled. May cause genetic defects and cancer. May damage fertility/ unborn child. Causes damage to kidneys, central nervous system, and lungs. May be fatal if swallowed and enters airways. **Precautionary Statement(s) Prevention** Do not breathe fumes, vapor, or spray. Wash after handling. Use only in a well-ventilated area. **Do not eat, drink or smoke when using this product.** Wear PPE. **Response** IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air & keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN: Wash with soap and water. If skin irritation or rash 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. IF SWALLOWED: Immediately call a POISON CENTER. **Do NOT induce vomiting.** **Storage** in a well-ventilated place. Keep container closed. **Disposal** according to with all applicable regulations. **SAFETY KLEEN\* See Safety Data Sheet for further details \* 800.323.5040**



# USED OIL

## Danger!



**Hazard Statement(s)** Harmful if swallowed. Causes skin & eye irritation. May cause or breathing difficulties if inhaled. May cause genetic defects and cancer. May damage fertility/ unborn child. Causes damage to kidneys, central nervous system, and lungs. May be fatal if swallowed and enters airways. **Precautionary Statement(s) Prevention** Do not breathe fumes, vapor, or spray. Wash after handling. Use only in a well-ventilated area. **Do not eat, drink or smoke when using this product.** Wear PPE. **Response** IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air & keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF ON SKIN: Wash with soap and water. If skin irritation or rash 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. IF SWALLOWED: Immediately call a POISON CENTER. **Do NOT induce vomiting.** **Storage** in a well-ventilated place. Keep container closed. **Disposal** according to with all applicable regulations. **SAFETY KLEEN\* See Safety Data Sheet for further details \* 800.323.5040**





# Lead Acid Battery Filled with Acid

## Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 02/01/2021

Revision date: n/a

Printed: 03/19/2021

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Product Name Lead Acid Battery Filled with Acid  
Synonyms Lead Acid Battery, Wet, Filled with acid / Wet Cell Battery / Flooded battery

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

Identified Use(s) Batteries for automotive  
Uses Advised Against None identified

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

Supplier  
Company Identification Interstate Batteries Inc.  
Address 12770 Merit Drive Suite 1000  
Dallas, TX 75251  
Telephone: 866-884-4635

#### 1.4 Emergency telephone number

Emergency Phone No. 1-800-255-3924 (24 HOURS)  
Chemtel

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

US 29 CFR 1910.1200 Explosive, Category 1.3  
Acute toxicity (oral, inhalation, dermal), Category 4  
Skin corrosion/irritation, Category 1A  
Serious eye damage/irritation, Category 1  
Carcinogenicity, Category 1A  
Reproductive toxicity, Category 1A  
Lactation  
Specific target organ toxicity — repeated exposure, Category 2  
Hazardous to the Aquatic Environment – Chronic Hazard, Category 2

#### 2.2 Label elements

According to US 29 CFR 1910.1200

Product Name Lead Acid Battery Filled with Acid

Hazard Pictogram(s)





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Signal Word(s)

Danger

Hazard Statement(s)

Explosive; fire, blast or projection hazard.  
Harmful if swallowed, inhaled or in contact with skin.  
Causes severe skin burns and eye damage.  
May cause cancer.  
May damage fertility or the unborn child.  
May cause harm to breast-fed children.  
May cause damage to organs (Blood, Kidneys, Central nervous system) through prolonged or repeated exposure (Ingestion / Dermal).  
Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

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.  
Avoid breathing fume/gas/mist/vapors.  
Avoid contact during pregnancy and while nursing.  
Wash hands and exposed skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Avoid release to the environment.  
Wear protective gloves/eye protection.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
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 exposed or concerned: Get medical advice/attention.  
Call a POISON CENTER/doctor if you feel unwell.  
Take off contaminated clothing and wash it before reuse.  
Store locked up.  
Dispose of contents in accordance with local, state or national legislation.

### 2.3 Other hazards

Other hazards which do not result in classification

If overcharged or heated, it may erupt and cause a blast or projection hazard. May form explosive air/gas mixture during charging. Extremely flammable gas (hydrogen).

### 2.4 Unknown acute toxicity

Not applicable



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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Not applicable.

#### 3.2 Mixtures

HAZARDOUS INGREDIENT(S)	CAS No.	%W/W	Component / element
Sulphuric acid	7664-93-9	30 - 38	Electrolyte
Lead	7439-92-1	48 - 59	Inorganic lead compounds
lead dioxide	1309-60-0	10.00	
lead sulphate	7446-14-2	< 1	
antimony	7440-36-0	0.5 - 4	
None hazardous polymer/ copolymer	Varies	5 - 10	Case Material

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (l)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures

Inhalation	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Keep patient at rest and give oxygen if breathing difficult. Apply artificial respiration if necessary (do not employ mouth-to-mouth method).
Skin Contact	Rinse skin immediately with plenty of water for 15-20 minutes. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Immediately call a POISON CENTER/doctor.
Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Do not give anything by mouth to an unconscious person.

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

Not a likely route of exposure. If a battery ruptures:

Inhalation of mist or vapors may be harmful or fatal if inhaled in a confined area. May cause severe irritation and burns of the nose, throat and respiratory tract.

Direct eye contact with the liquid or exposure to vapors or mists may cause tearing, redness, swelling, corneal damage, and irreversible eye damage. Splashes in the eyes will cause severe burns.

Direct contact to skin and may result in redness, swelling, burns and severe skin damage. Skin contact may aggravate an existing dermatitis condition.

Accidental ingestion causes severe burns of the mouth or perforation of the esophagus or stomach. May be fatal if swallowed.

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

Immediately call a POISON CENTER/doctor. Treat symptomatically.



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### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing Media

Suitable Extinguishing Media

As appropriate for surrounding fire. Foam; dry chemical. Do not use carbon dioxide directly on cells.

If a battery ruptures, use dry chemical, soda ash, lime, sand or carbon dioxide.

Unsuitable Extinguishing Media

None identified.

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

May decompose in a fire, giving off toxic and irritant vapors. Lead, lead compounds and sulfuric acid fume may be released during a fire involving the product.

#### 5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Beware of acid splatter during water application and wear acid-resistant clothing, gloves, face and eye protection.

If batteries are on charge, shut off power to the charging equipment, but note that strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down. Dike fire control water for later disposal.

#### 5.4. Other information

Highly flammable hydrogen gas is generated during charging and operation of batteries. If ignited by burning cigarette, naked flame or spark may cause battery explosion with dispersion of casing fragments and corrosive liquid electrolyte.

Carefully follow manufacturer's instructions for installation and service.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

If a battery ruptures: Avoid contact with any spilled material. Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Provide adequate ventilation. Contain spill, isolate hazard area. Limit site access to emergency responders. Neutralize with sodium bicarbonate, soda ash, lime or other neutralizing agent. Ensure full personal protection (including respiratory protection) during removal of spillages. Place battery in suitable container for disposal. Dispose of contaminated material in accordance with applicable local, state and federal regulations. Sodium bicarbonate, soda ash, sand, lime or other neutralizing agent should be kept on-site for spill remediation.

#### 6.2 Environmental precautions

Lead and its compounds and sulfuric acid can pose a severe threat to the environment. Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body. Contamination of water, soil, and air should be prevented.

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

Neutralize with sodium bicarbonate, soda ash, lime or other neutralizing agent.

Ensure full personal protection (including respiratory protection) during removal of



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spillages. Place battery in suitable container for disposal. Dispose of contaminated material in accordance with applicable local, state and federal regulations. Sodium bicarbonate, soda ash, sand, lime or other neutralizing agent should be kept on-site for spill remediation.

### 6.4 Reference to other sections

Acid resistant aprons, boots and protective clothing. ANSI approved safety glasses with side shields/face shield recommended. Ventilate enclosed areas. See Also Section 8, 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Handle batteries cautiously, do not tip to avoid spills. Avoid contact with internal components. Make certain vent caps are on securely. Unless involved in recycling operations, do not breach the casing or empty the contents of the battery. Wear protective clothing when filling or handling batteries. Follow manufacturer's instructions for installation and service. Do not allow conductive material to touch the battery terminals. Short circuit may occur and cause battery failure and fire. There may be increasing risk of electric shock from strings of connected batteries. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Eyewash stations and safety showers should be provided with unlimited water supply. Handle in accordance with good industrial hygiene and safety practice. Charge batteries in areas with adequate ventilation.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact during pregnancy and while nursing. Do not eat, drink or smoke when using this product.

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

Store batteries under roof in cool, dry, well-ventilated areas separated from incompatible materials and from activities that may create flames, spark, or heat. Store on smooth, impervious surfaces provided with measures for liquid containment in the event of electrolyte spills. Keep away all sources of gas ignition and do not allow metallic articles to simultaneously contact the negative and positive terminals of a battery. Follow manufacturer's instructions for installation and service. Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water. Use banding or stretch wrap to secure items for shipping.

Storage temperature	Ambient. Do not use or store near heat or open flame.
Storage life	Stable under normal conditions.
Incompatible materials	None known.

### 7.3 Specific end use(s)

Not known.

**Charging:** There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged will generate and release flammable hydrogen gas. Charging space should be ventilated. Keep battery vent caps in position. Prohibit smoking and avoid creation of flames and sparks nearby. Wear face and eye protection when near batteries being charged.



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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

##### 8.1.1 Occupational Exposure Limits

Occupational Exposure Limits						
SUBSTANCE.	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note:
Sulfuric acid	7664-93-9		0.2			ACGIH TLV, T, A2, M
Sulfuric acid	7664-93-9		1			NIOSH REL Z-1
Sulfuric acid	7664-93-9		0.1		3	OSHA PEL
Sulfuric acid	7664-93-9		1			OSHA PEL Z-1
Antimony and compounds, as Sb	7440-36-0		0.5			ACGIH TLV
Antimony and compounds (as Sb)	7440-36-0		0.5			NIOSH REL Z-1
Antimony and compounds, as Sb	7440-36-0		0.5			OSHA PEL
Antimony and compounds (as Sb)	7440-36-0		0.5			OSHA PEL Z-1
Lead and inorganic compounds, as Pb	7439-92-1		0.05			ACGIH TLV, A3
Lead, inorganic (as Pb)	7439-92-1		0.05			NIOSH REL Z-1
Lead (metallic) and inorganic compounds, dust and fume, as Pb	7439-92-1		0.05			OSHA PEL
Lead and inorganic compounds, as Pb	1309-60-0		0.05			ACGIH TLV, A3
Lead, inorganic (as Pb)	1309-60-0		0.05			NIOSH REL Z-1
Lead (metallic) and inorganic compounds, dust and fume, as Pb	1309-60-0		0.05			OSHA PEL
Lead and inorganic compounds, as Pb	7446-14-2		0.05			ACGIH TLV, A3
Lead, inorganic (as Pb)	7446-14-2		0.05			NIOSH REL Z-1
Lead (metallic) and inorganic compounds, dust and fume, as Pb	7446-14-2		0.05			OSHA PEL

Remark  
ACGIH TLV

Notes  
The American Conference of Governmental Industrial Hygienists (ACGIH®) Threshold Limit Values (TLVs®) 2020



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T	Thoracic particulate matter
A2	Suspected Human Carcinogen
M	Classification refers to sulfuric acid contained in strong inorganic acid mists.
NIOSH REL Z-1	National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs) from the NIOSH Pocket Guide to Chemical Hazards table Z-1: Up to 10-hour time weighted average (TWA) during a 40-hour work week
OSHA PEL	Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).
OSHA PEL Z-1	Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) from 29 CFR 1910.1000 Z-1 Table
A3	Confirmed Animal Carcinogen with Unknown Relevance to Humans

BEI: Biological Exposure Indices (ACGIH)						
Substances	CAS Number	Sampling	Tissues	Control parameters	Biological monitoring guidance value	Comments
Lead and inorganic compounds	7439-92-1	Not critical	blood	Lead	200 µg/L	p
Lead and inorganic compounds	1309-60-0	Not critical	blood	Lead	200 µg/L	p
Lead and inorganic compounds	7446-14-2	Not critical	blood	Lead	200 µg/L	p

Remark	Notes
p	Persons applying this BEI® are encouraged to counsel female workers of child-bearing age about the risk of delivering a child with a PbB over the current CDC reference value.(CDC: Guidelines for the identification and management of lead exposure in pregnant and lactating women, 2010.)

### 8.2 Exposure controls

8.2.1. Appropriate engineering controls Store and handle in well-ventilated area. Use with ventilation, local exhaust ventilation or breathing protection. If mechanical ventilation is used, components must be acid-resistant.

In areas where water and sulfuric acid solutions are handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

#### 8.2.2. Personal protection equipment



**Eye Protection** NONE REQUIRED FOR NORMAL HANDLING OF THE FINISHED PRODUCT. If necessary to handle damaged product where exposure to the organic electrolyte is a possibility, chemical splash goggles and a face shield are recommended.



**Skin protection** NONE REQUIRED FOR NORMAL HANDLING OF THE FINISHED PRODUCT. If battery case is damaged, use rubber or plastic acid-resistant gloves with elbow-length gauntlet, acid-resistant apron, clothing and boots.



**Respiratory protection** NONE REQUIRED FOR NORMAL HANDLING OF THE FINISHED PRODUCT. When concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or MSHA-approved respiratory protection.



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Thermal hazards

None known.

8.2.3. Environmental Exposure Controls Spillages or uncontrolled discharges into watercourses must be alerted to the appropriate regulatory body.

### 8.3 Other information

Chemically impervious apron and face shield recommended when adding water or electrolyte to batteries. Wash Hands after handling.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Manufactured Article. Contains Liquid.
	Color : Clear (Electrolyte)
Odor	Sharp, penetrating, pungent odor
Odor Threshold	Not known.
pH	< 1 - 2
Melting Point/Freezing Point	ca 320F Polypropylene
Initial boiling point and boiling range	203 - 250 F Electrolyte
Flash Point	Not known.
Evaporation Rate	< 1 Relative Evaporation Rate (Butyl Acetate = 1)
Flammability (solid, gas)	Not known.
Upper/lower flammability or explosive limits	Flammable Limit Lower - 4.1% (Hydrogen) Flammable Limit Upper - 74.2 % (Hydrogen)
Vapor pressure	10 – 10.95 Vapour Pressure (mm Hg)
Vapor density	> 1 Vapour Density (Air=1)
Density (g/ml)	Not known.
Relative density	1.215 - 1.350 Density (water=1)
Solubility(ies)	Solubility (Water) : 100% Soluble Electrolyte Solubility (Other) : Not known.
Partition coefficient: n-octanol/water	Not known.
Auto-ignition temperature	1076F (Hydrogen)
Decomposition Temperature (°C)	Not known.
Viscosity	Not known.
Explosive properties	Not known.
Oxidizing properties	Not known.

### 9.2 Other information

None.



# Lead Acid Battery Filled with Acid

## Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 02/01/2021

Revision date: n/a

Printed: 03/19/2021

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity

None anticipated.

#### 10.2 Chemical Stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purpose.

#### 10.4 Conditions to avoid

Prolonged overcharge at high current. Keep away from heat and sources of ignition.  
Mechanical impact.

#### 10.5 Incompatible materials

This article is considered stable under normal conditions. If a battery ruptures:  
Reacts with organic materials. Strong reducing agents and metals.  
Electrolyte: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers, and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas.

#### 10.6 Hazardous decomposition products

Electrolyte: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide.  
Lead compounds: Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

##### Acute toxicity - Ingestion

Self classification: Harmful if swallowed.

Ingesting Sulfuric Acid may cause severe irritation of mouth, throat, esophagus and stomach.

Acute ingestion of Lead Compounds may cause abdominal pain, nausea, vomiting, diarrhea and severe cramping. This may lead rapidly to systemic toxicity and must be treated by a physician.

##### Acute toxicity - Skin Contact

Self classification: Harmful in contact with skin.

Inhalation of sulfuric acid vapors or mists may cause severe respiratory irritation.

Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.

##### Acute toxicity - Inhalation

Self classification: Harmful if inhaled.

Contact with Arsenic compounds may cause dermatitis and skin hyperpigmentation.



# Lead Acid Battery Filled with Acid

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Skin corrosion/irritation

Calculation method : Causes severe skin burns and eye damage.  
Skin contact with Sulfuric Acid causes severe irritation, burns, and ulceration.

Serious eye damage/irritation

Calculation method : Causes serious eye damage.

Skin sensitization data

Not classified.

Respiratory sensitization data

Not classified.

Germ cell mutagenicity

Not classified.

Carcinogenicity

Self classification: May cause cancer.

Sulfuric Acid	
IARC	Group 1 - Carcinogen

Lead compounds	
IARC	Group 2A - Likely Carcinogenic to animal at extream doses

Arsenic compounds	
IARC	Group 1 - Carcinogen

Reproductive toxicity

Self classification: May damage fertility or the unborn child.

Lactation

May cause harm to breast-fed children.

STOT - single exposure

Not classified.

STOT - repeated exposure

Self classification: Causes damage to organs (Blood Kidneys Central nervous system) through prolonged or repeated exposure (Ingestion / Dermal).

Aspiration hazard

Not classified.

### 11.2 Other information

All heavy metals, including the hazardous ingredients in this product, are taken into the body primarily by inhalation and ingestion. Most inhalation problems can be avoided by adequate precautions such as ventilation and respiratory protection covered in Section 8. Follow good personal hygiene to avoid inhalation and ingestion: wash hands, face, neck and arms thoroughly before eating, smoking or leaving the work site. Keep contaminated clothing out of non- contaminated areas, or wear cover clothing when in such areas. Restrict the use and presence of food, tobacco and cosmetics to non-contaminated areas. Work clothes and work equipment used in contaminated areas must remain in designated areas and never taken home or laundered with personal non-contaminated clothing. This product is intended for industrial use only and should be isolated from children and their environment.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Toxicity - Aquatic invertebrates

Not known.

Toxicity - Fish

Not known.



# Lead Acid Battery Filled with Acid

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Toxicity - Algae	Not known.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.
<b>12.2 Persistence and degradability</b>	
	Not known.
<b>12.3 Bioaccumulative potential</b>	
	Not known.
<b>12.4 Mobility in soil</b>	
	Not known.
<b>12.5 Other adverse effects</b>	
	Not known.

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Spent Batteries: Send to secondary lead smelter for recycling. Spent lead-acid batteries are not regulated as hazardous waste when the requirements of 40 CFR Section 266.80 are met. Spilled sulfuric acid is a characteristic hazardous waste; EPA hazardous waste number D002 (corrosivity) and D008 (lead).

Electrolyte: Place neutralized slurry into sealed acid resistant containers and dispose of as hazardous waste, as applicable. Large water diluted spills, after neutralization and testing, should be managed in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

#### 13.2 Additional Information

Disposal should be in accordance with local, state or national legislation. Following local, State/Provincial, and Federal/National regulations applicable to end-of-life characteristics will be the responsibility of the end-user.

### SECTION 14: TRANSPORT INFORMATION

#### In accordance with DOT

49 CFR 173.159

#### 14.1 UN number

UN No. 2794

#### 14.2 UN proper shipping name

UN proper shipping name Batteries, wet, filled with acid

#### 14.3 Transport hazard class(es)

DOT Class 8

DOT Label Corrosive

Packaging group III



# Lead Acid Battery Filled with Acid

## Safety Data Sheet

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49 CFR 173.159(e) Specifies that when transported by highway or rail, electric storage batteries containing electrolyte or corrosive battery fluid are not subject to any other requirements of this subchapter, if all of the following are met:

- (1) No other hazardous materials may be transported in the same vehicle;
- (2) The batteries must be loaded or braced so as to prevent damage and short circuits in transit;
- (3) Any other material loaded in the same vehicle must be blocked, braced, or otherwise secured to prevent contact with or damage to the batteries; and
- (4) The transport vehicle may not carry material shipped by any person other than the shipper of the batteries.

If any of the above-referenced requirements are not met, the batteries must be shipped as fully-regulated Class 8 Corrosive hazardous materials.

### Transport by sea (IMDG)

IMDG Proper shipping name:	Batteries, wet, filled with acid
Hazards label	Corrosive
IMDG Class	8
Packaging group	n/a
UN identification	UN2794

### Air transport (IATA/ICAO)

IATA Proper Shipping Name	BATTERIES, WET, FILLED WITH ACID,
Hazards label	Corrosive
IMDG Class	8
Packaging group	n/a
UN identification	UN2794

## SECTION 15: REGULATORY INFORMATION

### 15.1 US Federal Regulations

Toxic and hazardous substances (29 CFR 1910; Subpart Z)	Listed : 7664-93-9, 7440-36-0, 7439-92-1, 1309-60-0, 7446-14-2
National emission standards for hazardous air pollutants (40 CFR 61.01)	Not listed
SARA Title III Section 313	Not listed
TSCA (Toxic Substance Control Act)	Listed : 7664-93-9 (Active), 7440-36-0 (Active), 7439-92-1 (Active), 9003-07-0 (Active), 1309-60-0 (Active), 7446-14-2 (Active)
CAA 602 - Ozone Depleting Substances (ODS)	Not listed

### 15.2 US State Regulations

State Right to Know Lists



**WARNING:** Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm, and during charging, strong inorganic acid mists containing sulfuric



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acid are evolved, a chemical Known to the State of California to cause cancer. Wash hands after handling.

[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Proposition 65 (California)

Minnesota

New Jersey

Pennsylvania

Rhode Island

### 15.3 Other

OSPAR List of Chemicals for Priority Action

OSHA (List of Highly Hazardous Chemicals, Toxics and Reactives)

NTP (National Toxicology Program )

IARC (International Agency for Research on Cancer )

Listed : 7439-92-1

Listed : 7664-93-9, 7440-36-0, 7439-92-1, 1309-60-0, 7446-14-2

Listed : 7664-93-9, 7440-36-0, 7439-92-1, 1309-60-0, 7446-14-2

Listed : 7664-93-9, 7440-36-0, 7439-92-1, 1309-60-0, 7446-14-2

Listed : 7664-93-9, 7439-92-1

Listed : 7439-92-1

Not listed

Listed : 7664-93-9, 7439-92-1, 1309-60-0, 7446-14-2

Listed : 7664-93-9, 7439-92-1, 9003-07-0, 1309-60-0, 7446-14-2

## SECTION 16: OTHER INFORMATION

### NFPA rating



### NFPA Hazards scale

0= Minimal

1= Slight

3= Moderate

4= Serious

5= Severe

## LEGEND

### Acronyms

ATE: Acute Toxicity Estimate

CAS : Chemical Abstracts Service

IATA : International Air Transport Association

ICAO : International Civil Aviation Organization

IMDG : International Maritime Dangerous Goods

LTEL : Long term exposure limit



# Lead Acid Battery Filled with Acid

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According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 02/01/2021

Revision date: n/a

Printed: 03/19/2021

RID : Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL : Short term exposure limit

STOT : Specific Target Organ Toxicity

UN : United Nations

Key literature references and sources for US CFR 1910.1200

data used to compile the SDS

Disclaimers

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.



# Material Safety Data Sheet

## R-12

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** R-12  
**DISTRIBUTOR:** National Refrigerants, Inc.  
661 Kenyon Avenue  
Bridgeton, New Jersey 08302

**FOR MORE INFORMATION CALL:**  
(Monday-Friday, 8:00am-5:00pm)  
1-800-262-0012

**IN CASE OF EMERGENCY CALL:**  
CHEMTREC: 1-800-424-9300

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>INGREDIENT NAME</u>	<u>CAS NUMBER</u>	<u>WEIGHT %</u>
Dichlorodifluoromethane	75-71-8	100

Trace impurities and additional material names not listed above may also appear in Section 15 toward the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

### 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At higher temperatures, (>250°C), decomposition products may include Hydrochloric Acid (HCl), Hydrofluoric Acid (HF) and carbonyl halides.

#### POTENTIAL HEALTH HAZARDS

**SKIN:** Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.

**EYES:** Liquid contact can cause severe irritation and frostbite. Mist may irritate.

**INHALATION:** R-12 is low in acute toxicity in animals even at concentrations of 5% (50,000 ppm). However, when oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

**INGESTION:** Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

**DELAYED EFFECTS:** None Known

# NATIONAL REFRIGERANTS™

R-12

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

<u>INGREDIENT NAME</u>	<u>NTP STATUS</u>	<u>IARC STATUS</u>	<u>OSHA LIST</u>
------------------------	-------------------	--------------------	------------------

No ingredients listed in this section

## 4. FIRST AID MEASURES

**SKIN:** Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

**EYES:** Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite, water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

**INHALATION:** Immediately remove patient to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. Get medical attention immediately. DO NOT give epinephrine (adrenaline).

**INGESTION:** Ingestion is unlikely because of the physical properties and is not expected to be hazardous. DO NOT induce vomiting unless instructed to do so by a physician.

**ADVICE TO PHYSICIAN:** Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

## 5. FIRE FIGHTING MEASURES

### FLAMMABLE PROPERTIES

<b>FLASH POINT:</b>	Gas, not applicable per DOT regulations
<b>FLASH POINT METHOD:</b>	Not applicable
<b>AUTOIGNITION TEMPERATURE:</b>	Unknown
<b>UPPER FLAME LIMIT (volume % in air):</b>	None*
<b>LOWER FLAME LIMIT (volume % in air):</b>	None*
	*Based on ASHRAE Standard 34 with match ignition
<b>FLAME PROPAGATION RATE (solids):</b>	Not applicable
<b>OSHA FLAMMABILITY CLASS:</b>	Not applicable

### **EXTINGUISHING MEDIA:**

Use any standard agent – choose the one most appropriate for type of surrounding fire (material itself is not flammable)

### **UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).



**R-12**

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**SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:**

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

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**6. ACCIDENTAL RELEASE MEASURES**

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**IN CASE OF SPILL OR OTHER RELEASE:** (Always wear recommended personal protective equipment.)

Evacuate unprotected personnel. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Unprotected personnel should not return until air has been tested and determined safe, including low-lying areas.

**Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.**

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**7. HANDLING AND STORAGE**

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**NORMAL HANDLING:** (Always wear recommended personal protective equipment.)

Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders.

**STORAGE RECOMMENDATIONS:**

Store in a cool, well-ventilated area of low fire risk and out of direct sunlight. Protect cylinder and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly after use and when empty.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

---

**ENGINEERING CONTROLS:**

Provide local ventilation at filling zones and areas where leakage is probable. Mechanical (general) ventilation may be adequate for other operating and storage areas.

**PERSONAL PROTECTIVE EQUIPMENT**

**SKIN PROTECTION:**

Skin contact with refrigerant may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed before reuse.

**EYE PROTECTION:**

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

# NATIONAL REFRIGERANTS™

R-12

## RESPIRATORY PROTECTION:

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH approved gas mask with organic vapor canister.

## ADDITIONAL RECOMMENDATIONS:

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

## EXPOSURE GUIDELINES

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
Dichlorodifluoromethane	None	1000 ppm (8hr)	None

## OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Hydrogen Fluoride: ACGIH TLV = 3 ppm ceiling

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>APPEARANCE:</b>	Clear, colorless liquid and vapor
<b>PHYSICAL STATE:</b>	Gas at ambient temperatures
<b>MOLECULAR WEIGHT:</b>	120.9
<b>CHEMICAL FORMULA:</b>	CCl <sub>2</sub> F <sub>2</sub>
<b>ODOR:</b>	Faint ethereal odor
<b>SPECIFIC GRAVITY (water = 1.0):</b>	1.34 @ 30°C (86°F)
<b>SOLUBILITY IN WATER (weight %):</b>	Unknown
<b>pH:</b>	Neutral
<b>BOILING POINT:</b>	-29.8°C (-21.6°F)
<b>FREEZING POINT:</b>	-157.7°C (-252°F)
<b>VAPOR PRESSURE:</b>	94.9 psia @ 70°F 195.6 psia @ 130°F
<b>VAPOR DENSITY (air = 1.0):</b>	4.2
<b>EVAPORATION RATE:</b>	>1
<b>% VOLATILES:</b>	100
<b>FLASH POINT:</b>	Not applicable

(Flash point method and additional flammability data are found in Section 5.)

COMPARED TO: CCl<sub>4</sub> = 1



R-12

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## 10. STABILITY AND REACTIVITY

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### NORMALLY STABLE? (CONDITIONS TO AVOID):

The product is stable.

Do not mix with oxygen or air above atmospheric pressure. Any source of high temperatures, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

### INCOMPATIBILITIES:

(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

### HAZARDOUS DECOMPOSITION PRODUCTS:

Halogens, halogen acids and possibly carbonyl halides.

### HAZARDOUS POLYMERIZATION:

Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

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### IMMEDIATE (ACUTE) EFFECTS:

LC<sub>50</sub> : 4 hr. (rat) - > 760,000 ppm / Cardiac Sensitization threshold (dog) – 50,000 ppm

10 min EC<sub>50</sub> – 254,000 ppm

### DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Subchronic: NOEL – 10,000 ppm

### OTHER DATA:

Teratology: Not a teratogen

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## 12. ECOLOGICAL INFORMATION

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### Degradability (BOD):

R-12 is a gas at room temperature; therefore, it is unlikely to remain in water.

Octanol Water Partition Coefficient: Unknown

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## 13. DISPOSAL CONSIDERATIONS

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### RCRA

Is the unused product a RCRA hazardous waste if discarded?

Not a hazardous waste

If yes, the RCRA ID number is:

Not applicable

### OTHER DISPOSAL CONSIDERATIONS:

Disposal must comply with federal, state, and local disposal or discharge laws. R-12 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

# NATIONAL REFRIGERANTS™

R-12

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

## 14. TRANSPORT INFORMATION

**US DOT HAZARD CLASS:** US DOT PROPER SHIPPING NAME: Dichlorodifluoromethane  
US DOT HAZARD CLASS: 2.2  
US DOT PACKING GROUP: Not applicable  
**US DOT ID NUMBER:** UN1028

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

## 15. REGULATORY INFORMATION

### TOXIC SUBSTANCES CONTROL ACT (TSCA)

**TSCA INVENTORY STATUS:** Listed on the TSCA inventory  
**OTHER TSCA ISSUES:** None

### SARA TITLE III / CERCLA

“Reportable Quantities” (RQs) and/or “Threshold Planning Quantities” (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA / CERCLA RQ (lb.)</u>	<u>SARA EHS TPO (lb.)</u>
Dichlorodifluoromethane	5000	None

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

**SECTION 311 HAZARD CLASS:** IMMEDIATE  
PRESSURE

### **SARA 313 TOXIC CHEMICALS:**

The following ingredients are SARA 313 “Toxic Chemicals”. CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
Dichlorodifluoromethane	None

### STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
No ingredients listed in this section		



**R-12**

**ADDITIONAL REGULATORY INFORMATION:**

R-12 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

**WARNING: DO NOT vent** to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. **Contains Dichlorodifluoromethane (CFC-12)**, a substance which harms public health and environment by destroying ozone in the upper atmosphere. Destruction of the ozone layer can lead to increased ultraviolet radiation which, with excess exposure to sunlight, can lead to an increase in skin cancer and eye cataracts.

**WHMIS CLASSIFICATION (CANADA):**

This product has been evaluated in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**FOREIGN INVENTORY STATUS:**

Canada – Listed on DSL  
EU - EINECS # 2206926

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**16. OTHER INFORMATION**

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**CURRENT ISSUE DATE:** December, 2008  
**PREVIOUS ISSUE DATE:** August, 2007

**OTHER INFORMATION:** HMIS Classification: Health – 1, Flammability – 0, Reactivity – 0  
NFPA Classification: Health – 2, Flammability – 0, Reactivity – 0  
ANSI/ASHRAE 34 Safety Group – A1

Regulatory Standards:

1. OSHA regulations for compressed gases: 29 CFR 1910.101
2. DOT classification per 49 CFR 172.101
3. Clean Air Act Class I Substance

General

- a) CGA pamphlet P-1, *Safe Handling of Compressed Gases in Containers*, 1984, Compressed Gas Association (1980 Printing)
- b) Bretherick, L., *Handbook of Reactive Chemical Hazards*, 4<sup>th</sup> ed., 1992, Butterworths, Boston, MA

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**17. DISCLAIMER**

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National Refrigerants, Inc. believes that the information and recommendations contained herein (including data and statements are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other methods of use of the product and of the information referred to herein are beyond the control of National Refrigerants. National Refrigerants expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.



## Safety Data Sheet

### R-134a

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** R-134a  
**OTHER NAME:** 1,1,1,2-Tetrafluoroethane  
**USE:** Refrigerant Gas  
**DISTRIBUTOR:** National Refrigerants, Inc.  
661 Kenyon Avenue  
Bridgeton, New Jersey 08302

**FOR MORE INFORMATION CALL:**  
(Monday-Friday, 8:00am-5:00pm)  
1-800-262-0012

**IN CASE OF EMERGENCY CALL:**  
CHEMTREC: 1-800-424-9300

#### 2. HAZARDS IDENTIFICATION

**CLASSIFICATION:** Gases under pressure, Liquefied Gas  
**SIGNAL WORD:** WARNING  
**HAZARD STATEMENT:** Contains gas under pressure, may explode if heated  
**SYMBOL:** Gas Cylinder  
**PRECAUTIONARY STATEMENT:** STORAGE: Protect from sunlight, store in a well ventilated place



**EMERGENCY OVERVIEW:** Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At higher temperatures, (>250°C), decomposition products may include Hydrofluoric Acid (HF) and carbonyl halides.

#### POTENTIAL HEALTH HAZARDS

**SKIN:** Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.

**EYES:** Liquid contact can cause severe irritation and frostbite. Mist may irritate.

**INHALATION:** R-134a is low in acute toxicity in animals. When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

**INGESTION:** Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

**DELAYED EFFECTS:** None Known

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

**INGREDIENT NAME**

No ingredients listed in this section

**NTP STATUS****IARC STATUS****OSHA LIST****3. COMPOSITION / INFORMATION ON INGREDIENTS****INGREDIENT NAME**

1,1,1,2-Tetrafluoroethane

**CAS NUMBER**

811-97-2

**WEIGHT %**

100

**COMMON NAME AND SYNONYMS**

R-134a; HFC134a

There are no impurities or stabilizers that contribute to the classification of the material identified in Section 2

**4. FIRST AID MEASURES**

**SKIN:** Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

**EYES:** Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite, water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

**INHALATION:** Immediately move to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. Get medical attention immediately. **DO NOT** give epinephrine (adrenaline).

**INGESTION:** Ingestion is unlikely because of the physical properties and is not expected to be hazardous. **DO NOT** induce vomiting unless instructed to do so by a physician.

**ADVICE TO PHYSICIAN:** Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

**5. FIRE FIGHTING MEASURES****FLAMMABLE PROPERTIES**

<b>FLASH POINT:</b>	Gas, not applicable per DOT regulations
<b>FLASH POINT METHOD:</b>	Not applicable
<b>AUTOIGNITION TEMPERATURE:</b>	>750°C
<b>UPPER FLAME LIMIT (volume % in air):</b>	None*
<b>LOWER FLAME LIMIT (volume % in air):</b>	None*
	*Based on ASHRAE Standard 34 with match ignition
<b>FLAME PROPAGATION RATE (solids):</b>	Not applicable
<b>OSHA FLAMMABILITY CLASS:</b>	Not applicable

**EXTINGUISHING MEDIA:**

Use any standard agent – choose the one most appropriate for type of surrounding fire (material itself is not flammable)



**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

R-134a is not flammable at ambient temperatures and atmospheric pressure. However, this material will become combustible when mixed with air under pressure and exposed to strong ignition sources. Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).

**SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:**

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

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**6. ACCIDENTAL RELEASE MEASURES**

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**IN CASE OF SPILL OR OTHER RELEASE:** (Always wear recommended personal protective equipment.)

Evacuate unprotected personnel. Product dissipates upon release. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Unprotected personnel should not return to the affected area until air has been tested and determined safe, including low-lying areas.

**Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.**

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**7. HANDLING AND STORAGE**

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**NORMAL HANDLING:**

(Always wear recommended personal protective equipment.)

Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders.

R-134a should not be mixed with air above atmospheric pressure for leak testing or any other purpose.

**STORAGE RECOMMENDATIONS:**

Store in a cool, well-ventilated area of low fire risk and out of direct sunlight. Protect cylinder and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly after use and when empty.

**INCOMPATIBILITIES:**

Freshly abraded aluminum surfaces at specific temperatures and pressures may cause a strong exothermic reaction. Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**ENGINEERING CONTROLS:**

Provide local ventilation at filling zones and areas where leakage is probable. Mechanical (general) ventilation may be adequate for other operating and storage areas.



**PERSONAL PROTECTIVE EQUIPMENT**

**SKIN PROTECTION:**

Skin contact with refrigerant may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed before reuse.

**EYE PROTECTION:**

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

**RESPIRATORY PROTECTION:**

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH approved gas mask with organic vapor canister.

**ADDITIONAL RECOMMENDATIONS:**

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

**EXPOSURE GUIDELINES**

<u>INGREDIENT NAME</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER LIMIT</u>
1,1,1,2-Tetrafluoroethane	None	None	*1000 ppm TWA (8hr)

\* = Workplace Environmental Exposure Level (AIHA)

**OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:**

Hydrogen Fluoride: ACGIH TLV: 2 ppm ceiling, 0.5 ppm TLV-TWA

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE:</b>	Clear, colorless liquid and vapor
<b>PHYSICAL STATE:</b>	Gas at ambient temperatures
<b>MOLECULAR WEIGHT:</b>	102
<b>CHEMICAL FORMULA:</b>	F <sub>3</sub> CCH <sub>2</sub> F
<b>ODOR:</b>	Faint ethereal odor
<b>SPECIFIC GRAVITY (water = 1.0):</b>	<1.22
<b>SOLUBILITY IN WATER (weight %):</b>	0.15 wt%
<b>pH:</b>	Neutral
<b>BOILING POINT:</b>	-26.2°C (-15.1°F)
<b>FREEZING POINT:</b>	-92.5°C (-141.9°F)
<b>VAPOR PRESSURE:</b>	85.8 psia @ 70°F 213.4 psia @ 130°F
<b>VAPOR DENSITY (air = 1.0):</b>	3.5
<b>EVAPORATION RATE:</b>	>1 <b>COMPARED TO:</b> CC1 <sub>4</sub> = 1
<b>% VOLATILES:</b>	100



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<b>ODOR THRESHHOLD:</b>	Not established
<b>FLAMMABILITY:</b>	Not applicable
<b>LEL/UEL:</b>	None/None
<b>RELATIVE DENSITY:</b>	1.21g/cm <sup>3</sup> at 25°C
<b>PARTITION COEFF (n-octanol/water)</b>	Log Pow: 1.06
<b>AUTO IGNITION TEMP:</b>	>750°C
<b>DECOMPOSITION TEMPERATURE:</b>	>250°C
<b>VISCOSITY:</b>	Not applicable
<b>FLASH POINT:</b>	Not applicable

(Flash point method and additional flammability data are found in Section 5.)

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## 10. STABILITY AND REACTIVITY

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### **NORMALLY STABLE: (CONDITIONS TO AVOID):**

The product is stable.

Do not mix with oxygen or air above atmospheric pressure. Any source of high temperatures, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

### **INCOMPATIBILITIES:**

(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

### **HAZARDOUS DECOMPOSITION PRODUCTS:**

Halogens, halogen acids and possibly carbonyl halides.

### **HAZARDOUS POLYMERIZATION:**

Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

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### **IMMEDIATE (ACUTE) EFFECTS:**

LC<sub>50</sub> :Inhalation 4 hr. (rat) - > 500,000 ppm / Cardiac Sensitization threshold (dog) 80,000 ppm. NOEL – 50,000 ppm

### **DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:**

Not mutagenic in four tests

Teratogenic NOEL (rat and rabbit) – 40,000 ppm

Subchronic inhalation (rat) NOEL – 50,000 ppm

Chronic NOEL – 10,000 ppm

### **REPEATED DOSE TOXICITY:**

Lifetime inhalation exposure of male rats was associated with a small increase in salivary gland fibrosarcomas.

### **FURTHER INFORMATION:**

Acute effects of rapid evaporation of the liquid may cause frostbite. Vapors are heavier than air and can displace oxygen causing difficulty breathing or suffocation. May cause cardiac arrhythmia.

### **OTHER DATA:**

Metabolism <0.5% as CO<sub>2</sub> in tests at 50,000 ppm, late developing benign tumors were found.

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**12. ECOLOGICAL INFORMATION**

**Degradability (BOD):** R-134a is a gas at room temperature; therefore, it is unlikely to remain in water.  
**Octanol Water Partition Coefficient:** See Section 9

**13. DISPOSAL CONSIDERATIONS**

**RCRA**

**Is the unused product a RCRA hazardous waste if discarded?** Not a hazardous waste  
**If yes, the RCRA ID number is:** Not applicable

**OTHER DISPOSAL CONSIDERATIONS:**

Disposal must comply with federal, state, and local disposal or discharge laws. R-134a is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

**14. TRANSPORT INFORMATION**

**US DOT ID NUMBER:** UN3159  
**US DOT PROPER SHIPPING NAME:** 1,1,1,2-Tetrafluoroethane or Refrigerant Gas R 134a  
**US DOT HAZARD CLASS:** 2.2  
**US DOT PACKING GROUP:** Not applicable  
For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

**15. REGULATORY INFORMATION**

**TOXIC SUBSTANCES CONTROL ACT (TSCA)**

**TSCA INVENTORY STATUS:** Listed on the TSCA inventory  
**OTHER TSCA ISSUES:** Subject to Section 12(b) export notification. May contain 0-10 ppm Ethane, 2-chloro-1,1,1-trifluoro, CAS# 75-88-7

**SARA TITLE III / CERCLA**

“Reportable Quantities” (RQs) and/or “Threshold Planning Quantities” (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA / CERCLA RQ (lb.)</u>	<u>SARA EHS TPQ (lb.)</u>
No ingredients listed in this section		

**Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.**

**SECTION 311 HAZARD CLASS:** IMMEDIATE  
PRESSURE

**SARA 313 TOXIC CHEMICALS:**  
The following ingredients are SARA 313 “Toxic Chemicals”. CAS numbers and weight percents are found in Section 2.

<u>INGREDIENT NAME</u>	<u>COMMENT</u>
No ingredients listed in this section	



**STATE RIGHT-TO-KNOW**

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
No ingredients listed in this section		

**ADDITIONAL REGULATORY INFORMATION:**

R-134a is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

**WARNING: DO NOT vent** to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. **Contains 1,1,1,2-Tetrafluoroethane (HFC-134a)**, a greenhouse gas which may contribute to global warming.

**WHMIS CLASSIFICATION (CANADA):**

This product has been evaluated in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

**FOREIGN INVENTORY STATUS:**

Canada – Listed on DSL  
EU - EINECS # 223770

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**16. OTHER INFORMATION**

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**CURRENT ISSUE DATE:** January 04, 2021  
**PREVIOUS ISSUE DATE:** April, 2018

**OTHER INFORMATION:** HMIS Classification: Health – 1, Flammability – 1, Reactivity – 0  
NFPA Classification: Health – 2, Flammability – 1, Reactivity – 0  
ANSI/ASHRAE 34 Safety Group – A1  
UL Classified

Regulatory Standards:

1. OSHA regulations for compressed gases: 29 CFR 1910.101
2. DOT classification per 49 CFR 172.101

Toxicity information per PAFT Testing

**DISCLAIMER:**

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**SECTION 1. IDENTIFICATION**

Product name : Solstice® yf Refrigerant (R-1234yf) (Cartridge)

Number : 00000023794

Product Use Description : Refrigerant

Manufacturer or supplier's details : Honeywell International Inc.  
115 Tabor Road  
Morris Plains, NJ 07950-2546

For more information call : 800-522-8001  
+1-973-455-6300(Monday-Friday, 9:00am-5:00pm)

**In case of emergency call : Medical: 1-800-498-5701 or +1-303-389-1414**  
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**  
:  
: (24 hours/day, 7 days/week)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form : Liquefied gas

Color : clear

Odor : slight

**Classification of the substance or mixture**

Classification of the substance or mixture : Flammable gases, Category 1  
Gases under pressure, Liquefied gas  
Simple Asphyxiant

**GHS Label elements, including precautionary statements**

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Symbol(s)

:



Signal word

: Danger

Hazard statements

: Extremely flammable gas.  
Contains gas under pressure; may explode if heated.  
May displace oxygen and cause rapid suffocation.

Precautionary statements

: **Prevention:**  
Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
  
**Response:**  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
Eliminate all ignition sources if safe to do so.  
  
**Storage:**  
Protect from sunlight. Store in a well-ventilated place.**Carcinogenicity**

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, IARC, or OSHA.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
2,3,3,3-Tetrafluoroprop-1-ene	754-12-1	100.00 %

**SECTION 4. FIRST AID MEASURES**

General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

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- Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.
- Skin contact : Rapid evaporation of the liquid may cause frostbite. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Wash contaminated clothing before re-use. Consult a physician.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In case of frostbite water should be lukewarm, not hot. Call a physician.
- Ingestion : Unlikely route of exposure. As this product is a gas, refer to the inhalation section. Do not induce vomiting without medical advice. If conscious, drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Notes to physician**

- Indication of immediate medical attention and special treatment needed, if necessary : Treat frost-bitten areas as needed. Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : In case of fire, allow gas to burn if flow cannot be shut off immediately.  
Apply water from a safe distance to cool container and protect surrounding area.  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during firefighting : Flammable gas.  
Contents under pressure.  
Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.  
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.  
Fire or intense heat may cause violent rupture of packages.  
Cool closed containers exposed to fire with water spray.  
Do not allow run-off from fire fighting to enter drains or water courses.

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In case of fire hazardous decomposition products may be produced such as:  
 Hydrogen fluoride  
 Carbonyl halides  
 Carbon monoxide  
 Carbon dioxide (CO<sub>2</sub>)

Special protective equipment for firefighters : In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit. No unprotected exposed skin areas.

Further information : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Wear personal protective equipment. Unprotected persons must be kept away. Wear self-contained breathing apparatus and protective suit. Eliminate all ignition sources if safe to do so. Avoid skin contact with leaking liquid (danger of frostbite). Ventilate the area. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing. Avoid accumulation of vapours in low areas. Unprotected personnel should not return until air has been tested and determined safe. Ensure that the oxygen content is  $\geq 19.5\%$ .

Environmental precautions : Prevent further leakage or spillage if safe to do so. The product evaporates readily. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up : Use explosion-proof equipment. No sparking tools should be used. Ventilate the area. Allow to evaporate.

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**SECTION 7. HANDLING AND STORAGE****Handling**

Precautions for safe handling : Handle with care.  
Wear personal protective equipment.  
Do not breathe vapour.  
Avoid contact with skin, eyes and clothing.  
Use only in well-ventilated areas.  
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C.  
Follow all standard safety precautions for handling and use of compressed gas cylinders.  
Use authorized cylinders only.  
Protect cylinders from physical damage.  
Do not puncture or drop cylinders, expose them to open flame or excessive heat.  
Do not remove screw cap until immediately ready for use.  
Always replace cap after use.

Advice on protection against fire and explosion : Container hazardous when empty.  
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.  
Keep product and empty container away from heat and sources of ignition.  
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.  
Take measures to prevent the build up of electrostatic charge. Electrical equipment should be protected to the appropriate standard.  
Use explosion-proof equipment.  
No sparking tools should be used.  
No smoking.

**Storage**

Conditions for safe storage, including any incompatibilities : Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.  
Keep containers tightly closed in a dry, cool and well-ventilated place.  
Keep away from heat and sources of ignition.  
Storage rooms must be properly ventilated.  
Ensure adequate ventilation, especially in confined areas.

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Protect cylinders from physical damage.  
 Store away from incompatible substances.  
 Store in original container.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.  
Do not breathe vapour.  
Avoid contact with skin, eyes and clothing.
- Engineering measures : Use with local exhaust ventilation.
- Eye protection : Safety goggles
- Hand protection : Protective gloves  
Gloves must be inspected prior to use.  
Replace when worn.
- Skin and body protection : Avoid skin contact with leaking liquid (danger of frostbite).  
Wear suitable protective equipment.
- Respiratory protection : No personal respiratory protective equipment normally required.  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
Use NIOSH approved respiratory protection.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.  
Ensure adequate ventilation, especially in confined areas.  
When using do not eat, drink or smoke.  
Remove and wash contaminated clothing before re-use.  
Keep working clothes separately.  
Do not breathe vapour.  
Avoid contact with skin, eyes and clothing.

**Exposure Guidelines**

Components	CAS-No.	Value	Control parameters	Update	Basis

## SAFETY DATA SHEET

**Honeywell****00000023794**

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2,3,3,3-Tetrafluoroprop-1-ene	754-12-1	TWA : Time weighted average	(500 ppm)	2009	WEEL:US. OARS. WEELs Workplace Environmental Exposure Level Guide
2,3,3,3-Tetrafluoroprop-1-ene	754-12-1	TWA : Time weighted average	(500 ppm)	03 15 2010	Honeywell:Limit established by Honeywell International Inc.
2,3,3,3-Tetrafluoroprop-1-ene	754-12-1	STEL : Short term exposure limit	(1,500 ppm)	03 15 2010	Honeywell:Limit established by Honeywell International Inc.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state	: Liquefied gas
Color	: clear
Odor	: slight
pH	: Note: Not applicable, as this product is a gas.
Melting point/range	: Note: Not applicable, as this product is a gas.
Boiling point/boiling range	: -29.4 °C
Flash point	: Note: Not applicable, as this product is a gas.
Evaporation rate	: Note: Not applicable, as this product is a gas.
lower flammability limit	: 6.2 %(V) Method: ASTM E681-04

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upper flammability limit	: 12.3 %(V) Method: ASTM E681-04
Vapor pressure	: 6,067 hPa at 21.1 °C(70.0 °F) 14,203 hPa at 54.4 °C(129.9 °F)
Vapor density	: 4 Note: (Air = 1.0)
Density	: 1.1 g/cm <sup>3</sup> at 25 °C
Water solubility	: 198.2 mg/l at 24 °C  Method: 92/69/EEC, A.6
Partition coefficient: n-octanol/water	: log Pow: 2.15 Method: 92/69/EEC, A.8
Ignition temperature	: 405 °C Method: Auto-ignition temperature
Viscosity, dynamic	: Note: Not applicable, as this product is a gas.
Viscosity, kinematic	: Note: Not applicable, as this product is a gas.
Oxidizing properties	: Not applicable: Not expected to have oxidizing properties based on theoretical evaluation
Molecular weight	: 114 g/mol

**SECTION 10. STABILITY AND REACTIVITY**

Chemical stability : Stable under normal conditions.

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Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Keep away from heat and sources of ignition. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Decomposes under high temperature. Some risk may be expected of corrosive and toxic decomposition products.
Incompatible materials	: Alkali metals Oxidizers (e.g. peroxide residues present in insufficiently cured rubbers) Finely divided metal powders such as aluminum, magnesium, or zinc.
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Hydrogen fluoride Carbonyl halides Carbon monoxide Carbon dioxide (CO <sub>2</sub> )

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute inhalation toxicity	: LC50: > 400000 ppm Exposure time: 4 h Species: Rat Method: OECD Test Guideline 403
Skin irritation	: Note: Not applicable study technically not feasible
Eye irritation	: Note: Not applicable study technically not feasible
Sensitisation	: Dermal Note: Not applicable, as this product is a gas. study technically not feasible

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- Repeated dose toxicity
- : Species: Rat  
Application Route: Inhalation  
Exposure time: 2 Weeks  
No-observed-effect level: 50000 ppm  
Method: OECD Test Guideline 412
  - : Species: Rat  
Application Route: Inhalation  
Exposure time: 4 Weeks  
NOAEL (No observed adverse effect level): 50000 ppm  
Method: OECD Test Guideline 412
  - : Species: Rat  
Application Route: Inhalation  
Exposure time: 13 Weeks  
NOAEL (No observed adverse effect level): 50000 ppm  
Method: OECD Test Guideline 413
  - : Species: Rabbit, male  
Application Route: Inhalation  
Exposure time: 28 d  
No-observed-effect level: 500 ppm  
Method: OECD Test Guideline 412  
Note: There are no observed toxicological effects, which result in classification as a specific target organ toxicant.
  - : Species: Rabbit, female  
Application Route: Inhalation  
Exposure time: 28 d  
No-observed-effect level: 1000 ppm  
Method: OECD Test Guideline 412  
Note: There are no observed toxicological effects, which result in classification as a specific target organ toxicant.
  - : Species: Mini-pig  
Application Route: Inhalation  
Exposure time: 28 d  
NOAEL (No observed adverse effect level): 10000 ppm  
Note: highest exposure tested
- Genotoxicity in vitro
- : Test Method: Ames test  
Result: 20% and higher, positive in TA 100 and e. coli WP2 uvrA, negative in TA98, TA100, and TA1535.  
Method: OECD Test Guideline 471

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	: Test Method: Chromosome aberration test in vitro Cell type: Human lymphocytes Result: negative Method: OECD Test Guideline 473 Note: Dose 760,000 ppm
Genotoxicity in vivo	: Species: Mouse Cell type: Micronucleus Dose: up to 200,000 ppm (4 hour) Method: OECD Test Guideline 474 Result: negative
Genotoxicity in vivo	: Test Method: Unscheduled DNA synthesis Dose: up to 50,000 ppm (4 weeks) Method: OECD Test Guideline 486 Result: negative
Genotoxicity in vivo	: Species: Rat Cell type: Micronucleus Dose: up to 50,000 ppm (4 weeks) Method: OECD Test Guideline 474 Result: negative
Carcinogenicity	: Species: Rat Note: Not classified as a human carcinogen. Substance not expected to be a carcinogen based on available data.
Reproductive toxicity	: Test Method: Two-generation study Species: Rat Application Route: Inhalation NOAEL, parent: 50,000 ppm NOAEL, F1: 50,000 ppm Method: OECD Test Guideline 416
Aspiration toxicity	: Not applicable, as this product is a gas. study technically not feasible
Teratogenicity	: Species: Rat Application Route: inhalation (gas)  General Toxicity Maternal - No observed adverse effect level: 50,000 ppm Developmental Toxicity - No observed adverse effect level:

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50,000 ppm  
Method: OECD Test Guideline 414

: Species: Rabbit Application Route: inhalation (gas)

General Toxicity Maternal - Lowest observed adverse effect  
concentration: 2,500 ppm

Embryo-fetal toxicity - No observed adverse effect  
concentration: 4,000 ppm

Method: OECD Test Guideline 414

Note: Embryo-fetal toxicity observed at maternally toxic  
concentrations

Further information

: Note: Cardiac Sensitization (dog): No effects for exposures  
up to 12% (120,189 ppm)

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

Toxicity to fish : LC50: > 197 mg/l  
Exposure time: 96 h  
Species: Cyprinus carpio (Carp)  
Method: OECD Test Guideline 203  
Note: No demonstrable toxic effect in saturated solution.

Toxicity to daphnia and other aquatic invertebrates : EC50: > 83 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 202

Toxicity to algae : EC50: > 100 mg/l  
Species: Scenedesmus capricornutum (fresh water algae)  
Method: OECD Test Guideline 201

**Elimination information (persistence and degradability)**

Bioaccumulation : Note: Due to the distribution coefficient n-octanol/water,  
accumulation in organisms is not expected.

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Biodegradability : Result: Not readily biodegradable.  
Method: OECD Test Guideline 301F

**Further information on ecology****Ecotoxicology Assessment**

Results of PBT assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

**SECTION 14. TRANSPORT INFORMATION**

**DOT** UN/ID No. : UN 2037  
Proper shipping name : Gas cartridges  
Class : 2.1  
Packing group  
Hazard Labels : 2.1

**IATA** UN/ID No. : UN 2037  
Description of the goods : Gas cartridges  
Class : 2.1  
Hazard Labels : 2.1  
Packing instruction (cargo : 203  
aircraft)  
Packing instruction : 203  
(passenger aircraft)  
Packing instruction : Y203  
(passenger aircraft)

**IMDG** UN/ID No. : UN 2037  
Description of the goods : Gas cartridges  
Class : 2  
Hazard Labels : 2  
EmS Number : F-D, S-U  
Marine pollutant : no

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**SECTION 15. REGULATORY INFORMATION****Inventories**

- US. Toxic Substances Control Act : On TSCA Inventory
- Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory
- Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL
- Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory
- Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory
- Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act : On the inventory, or in compliance with the inventory
- China. Inventory of Existing Chemical Substances : 2,3,3,3-Tetrafluoroprop-1-ene 754-12-1  
: On the inventory, or in compliance with the inventory
- New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory
- TSCA 12B : US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)  
2,3,3,3-Tetrafluoroprop-1-ene 754-12-1

**National regulatory information**

- US. Toxic Substances Control Act (TSCA) Section :  
: Issued.

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5(a)(2) Final Significant  
New Use Rules (SNURs)  
(40 CFR 721, Subpt E)

: 2,3,3,3-Tetrafluoroprop-1-ene      754-12-1

**SARA 302 Components** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components** : 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.

**SARA 311/312 Hazards** : Fire Hazard  
Sudden Release of Pressure Hazard  
Acute Health Hazard

**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.

**SECTION 16. OTHER INFORMATION**

	<b>HMIS III</b>	<b>NFPA</b>
Health hazard	: 0	2
Flammability	: 2	2
Physical Hazard	: 2	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

**Further 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

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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. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 11/02/2018

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group

# SAFETY DATA SHEET

45854

## Section 1. Identification

**Product name** : KRYLON® PROFESSIONAL Solvent-Based Marking Paint  
Fluorescent Orange

**Product code** : 45854

**Other means of identification** : Not available.

**Product type** : Aerosol.

**Relevant identified uses of the substance or mixture and uses advised against**

Paint or paint related material.

**Manufacturer** : Krylon Products Group  
180 Brunel Road  
Mississauga, ON L4Z 1T5

**Emergency telephone number of the company** : (800) 424-9300

**Product Information Telephone Number** : (800) 247-3268

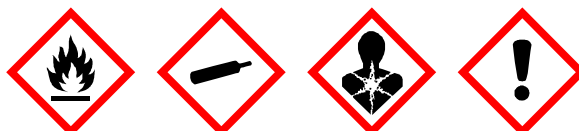
**Transportation Emergency Telephone Number** : (800) 424-9300

## 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  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2  
TOXIC TO REPRODUCTION - Category 1B  
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: 19.2% (oral), 33.3% (dermal), 35.7% (inhalation)

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Danger

**Date of issue/Date of revision** : 5/14/2024 **Date of previous issue** : 1/21/2024

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Fluorescent Orange

**Version** : 26 1/22

**SHW-85-NA-GHS-CA**

## Section 2. Hazards identification

**Hazard statements** : Extremely flammable aerosol.  
Contains gas under pressure; may explode if heated.  
May be fatal if swallowed and enters airways.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
Suspected of causing cancer.  
May damage fertility or the unborn child.  
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, protective clothing and eye or face protection. 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 thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Pressurized container: Do not pierce or burn, even after use.

**Response** : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or 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 advice or attention.

**Storage** : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Keep container tightly closed.

**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.  
This product contains a component that is either subject to a CEPA ministerial condition or an existing/proposed SNAC (Significant New Activity).  
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

## Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Methyl Acetate	16.5	79-20-9
Propane	13.6	74-98-6
Toluene	12.53	108-88-3
Butane	6.4	106-97-8
Lt. Aliphatic Hydrocarbon Solvent	5.59	64742-89-8
Hexane	1.57	110-54-3
Xylene, mixed isomers	1.05	1330-20-7
2-Methylpentane	0.73	107-83-5
3-Methylpentane	0.27	96-14-0
2,3-Dimethylbutane	0.23	79-29-8
Methyl Ethyl Ketoxime	0.19	96-29-7
Ethylbenzene	0.18	100-41-4
Light Aliphatic Hydrocarbon	0.17	64742-47-8
Light Aliphatic Hydrocarbon	0.11	64742-47-8

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 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** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. 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. 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.

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## Section 4. First aid measures

- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- 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** : 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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.

## Section 5. Fire-fighting measures

- 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.
- Remark** : Flammable aerosol.

## 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** : **This product contains a component that is either subject to a CEPA ministerial condition or an existing/proposed SNAC (Significant New Activity).**  
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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. 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)

Ingredient name	CAS #	Exposure limits
Methyl Acetate	79-20-9	<b>ACGIH TLV (United States, 7/2023).</b> TWA: 200 ppm 8 hours. TWA: 606 mg/m <sup>3</sup> 8 hours. STEL: 250 ppm 15 minutes. STEL: 757 mg/m <sup>3</sup> 15 minutes. <b>NIOSH REL (United States, 10/2020).</b> TWA: 200 ppm 10 hours. TWA: 610 mg/m <sup>3</sup> 10 hours. STEL: 250 ppm 15 minutes. STEL: 760 mg/m <sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 5/2018).</b> TWA: 200 ppm 8 hours. TWA: 610 mg/m <sup>3</sup> 8 hours.
Propane	74-98-6	<b>NIOSH REL (United States, 10/2020).</b> TWA: 1000 ppm 10 hours. TWA: 1800 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 1000 ppm 8 hours. TWA: 1800 mg/m <sup>3</sup> 8 hours. <b>ACGIH TLV (United States, 7/2023). Oxygen Depletion [Asphyxiant]. Explosive potential.</b> <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, 10/2020).</b>
Toluene	108-88-3	<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, 10/2020).</b>

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## Section 8. Exposure controls/personal protection

		<p>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, 7/2023).</b>  <b>Ototoxicant.</b>  TWA: 20 ppm 8 hours.</p>
Butane	106-97-8	<p><b>NIOSH REL (United States, 10/2020).</b>  TWA: 800 ppm 10 hours.  TWA: 1900 mg/m<sup>3</sup> 10 hours.  <b>ACGIH TLV (United States, 7/2023).</b>  <b>[Butane] Explosive potential.</b>  STEL: 1000 ppm 15 minutes.</p>
Lt. Aliphatic Hydrocarbon Solvent Hexane	64742-89-8 110-54-3	<p>None.  <b>ACGIH TLV (United States, 7/2023).</b>  <b>Absorbed through skin.</b>  TWA: 50 ppm 8 hours.  <b>NIOSH REL (United States, 10/2020).</b>  TWA: 50 ppm 10 hours.  TWA: 180 mg/m<sup>3</sup> 10 hours.  <b>OSHA PEL (United States, 5/2018).</b>  TWA: 500 ppm 8 hours.  TWA: 1800 mg/m<sup>3</sup> 8 hours.</p>
Xylene, mixed isomers	1330-20-7	<p><b>OSHA PEL (United States, 5/2018).</b>  <b>[Xylenes]</b>  TWA: 100 ppm 8 hours.  TWA: 435 mg/m<sup>3</sup> 8 hours.  <b>ACGIH TLV (United States, 7/2023).</b> [p-xylene and mixtures containing p-xylene]  <b>Ototoxicant.</b>  TWA: 20 ppm 8 hours.</p>
2-Methylpentane	107-83-5	<p><b>ACGIH TLV (United States, 7/2023).</b>  <b>[Hexane isomers, other than n-Hexane]</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.  <b>NIOSH REL (United States, 10/2020).</b>  <b>[HEXANE ISOMERS]</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>
3-Methylpentane	96-14-0	<p><b>ACGIH TLV (United States, 7/2023).</b>  <b>[Hexane isomers, other than n-Hexane]</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.  <b>NIOSH REL (United States, 10/2020).</b>  <b>[HEXANE ISOMERS]</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>
2,3-Dimethylbutane	79-29-8	<p><b>ACGIH TLV (United States, 7/2023).</b></p>

## Section 8. Exposure controls/personal protection

Methyl Ethyl Ketoxime	96-29-7	<p><b>[Hexane isomers, other than n-Hexane]</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.  <b>NIOSH REL (United States, 10/2020).</b>  <b>[HEXANE ISOMERS]</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.  <b>OARS WEEL (United States, 4/2022). Skin sensitizer.</b>  TWA: 10 ppm 8 hours.  <b>ACGIH TLV (United States, 7/2023).</b>  <b>Ototoxicant.</b>  TWA: 20 ppm 8 hours.  <b>NIOSH REL (United States, 10/2020).</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.  <b>OSHA PEL (United States, 5/2018).</b>  TWA: 100 ppm 8 hours.  TWA: 435 mg/m<sup>3</sup> 8 hours.  <b>ACGIH TLV (United States, 7/2023).</b>  <b>[Kerosene] Absorbed through skin.</b>  TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapor) 8 hours.</p>
Ethylbenzene	100-41-4	<p><b>ACGIH TLV (United States, 7/2023).</b>  <b>Ototoxicant.</b>  TWA: 20 ppm 8 hours.  <b>NIOSH REL (United States, 10/2020).</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.  <b>OSHA PEL (United States, 5/2018).</b>  TWA: 100 ppm 8 hours.  TWA: 435 mg/m<sup>3</sup> 8 hours.  <b>ACGIH TLV (United States, 7/2023).</b>  <b>[Kerosene] Absorbed through skin.</b>  TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapor) 8 hours.</p>
Light Aliphatic Hydrocarbon	64742-47-8	<p><b>ACGIH TLV (United States, 7/2023).</b>  <b>[Kerosene] Absorbed through skin.</b>  TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapor) 8 hours.</p>
Light Aliphatic Hydrocarbon	64742-47-8	<p><b>ACGIH TLV (United States, 7/2023).</b>  <b>[Kerosene] Absorbed through skin.</b>  TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapor) 8 hours.</p>

**Occupational exposure limits (Canada)**

Ingredient name	CAS #	Exposure limits
Methyl acetate	79-20-9	<p><b>CA Alberta Provincial (Canada, 3/2023).</b> <span style="float: right;">▶</span>  OEL: 606 mg/m<sup>3</sup> 8 hours.  OEL: 757 mg/m<sup>3</sup> 15 minutes.  OEL: 250 ppm 15 minutes.  OEL: 200 ppm 8 hours.  <b>CA British Columbia Provincial (Canada, 8/2023).</b>  TWA: 200 ppm 8 hours.  STEL: 250 ppm 15 minutes.  <b>CA Ontario Provincial (Canada, 6/2019).</b>  TWA: 200 ppm 8 hours.  STEL: 250 ppm 15 minutes.  <b>CA Quebec Provincial (Canada, 7/2023).</b>  TWA: 200 ppm 8 hours.  TWA: 606 mg/m<sup>3</sup> 8 hours.  STEL: 250 ppm 15 minutes.  STEL: 757 mg/m<sup>3</sup> 15 minutes.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b>  STEL: 250 ppm 15 minutes.</p>

## Section 8. Exposure controls/personal protection

Normal propane	74-98-6	<p>TWA: 200 ppm 8 hours.  <b>CA Alberta Provincial (Canada, 3/2023).</b>                      OEL: 1000 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 7/2023).</b>                      TWAEV: 1000 ppm 8 hours.                      TWAEV: 1800 mg/m<sup>3</sup> 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b>                      STEL: 1250 ppm 15 minutes.                      TWA: 1000 ppm 8 hours.  <b>CA British Columbia Provincial (Canada, 8/2023). Oxygen Depletion [Asphyxiant]. Explosive potential.</b></p> <p><b>CA Ontario Provincial (Canada, 6/2019). Oxygen Depletion [Asphyxiant]. Explosive potential.</b></p>
Toluene	108-88-3	<p><b>CA Alberta Provincial (Canada, 3/2023). Absorbed through skin.</b>                      OEL: 50 ppm 8 hours.                      OEL: 188 mg/m<sup>3</sup> 8 hours.  <b>CA British Columbia Provincial (Canada, 8/2023).</b>                      TWA: 20 ppm 8 hours.  <b>CA Ontario Provincial (Canada, 6/2019).</b>                      TWA: 20 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 7/2023).</b>                      TWAEV: 20 ppm 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b>                      STEL: 60 ppm 15 minutes.                      TWA: 50 ppm 8 hours.</p>
Butane	106-97-8	<p><b>CA Alberta Provincial (Canada, 3/2023).</b>                      OEL: 1000 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 7/2023).</b>                      TWAEV: 800 ppm 8 hours.                      TWAEV: 1900 mg/m<sup>3</sup> 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013). [Butane]</b>                      STEL: 1250 ppm 15 minutes.                      TWA: 1000 ppm 8 hours.  <b>CA British Columbia Provincial (Canada, 8/2023). [butane, all isomers] Explosive potential.</b>                      STEL: 1000 ppm 15 minutes.  <b>CA Ontario Provincial (Canada, 6/2019). [Butane, All isomers] Explosive potential.</b>                      STEL: 1000 ppm 15 minutes.</p>
Normal hexane	110-54-3	<p><b>CA Alberta Provincial (Canada, 3/2023). Absorbed through skin.</b>                      OEL: 50 ppm 8 hours.                      OEL: 176 mg/m<sup>3</sup> 8 hours.  <b>CA British Columbia Provincial (Canada, 8/2023). Absorbed through skin.</b>                      TWA: 20 ppm 8 hours.  <b>CA Ontario Provincial (Canada, 6/2019). Absorbed through skin.</b></p>

## Section 8. Exposure controls/personal protection

Xylene	1330-20-7	<p>TWA: 50 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 7/2023). Absorbed through skin.</b>          TWAEV: 50 ppm 8 hours.          TWAEV: 176 mg/m<sup>3</sup> 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.</b>          STEL: 62.5 ppm 15 minutes.          TWA: 50 ppm 8 hours.  <b>CA Alberta Provincial (Canada, 3/2023). [Dimethylbenzene]</b>          OEL: 100 ppm 8 hours.          OEL: 651 mg/m<sup>3</sup> 15 minutes.          OEL: 150 ppm 15 minutes.          OEL: 434 mg/m<sup>3</sup> 8 hours.  <b>CA British Columbia Provincial (Canada, 8/2023). [Xylene (o, m &amp; p isomers)]</b>          TWA: 100 ppm 8 hours.          STEL: 150 ppm 15 minutes.  <b>CA Quebec Provincial (Canada, 7/2023). [Xylene]</b>          TWAEV: 100 ppm 8 hours.          TWAEV: 434 mg/m<sup>3</sup> 8 hours.          STEV: 150 ppm 15 minutes.          STEV: 651 mg/m<sup>3</sup> 15 minutes.  <b>CA Ontario Provincial (Canada, 6/2019). [Xylene (o-, m-, p-isomers)]</b>          STEL: 150 ppm 15 minutes.          TWA: 100 ppm 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013). [Xylene]</b>          STEL: 150 ppm 15 minutes.          TWA: 100 ppm 8 hours.</p>
Methyl Ethyl Ketoxime	96-29-7	<p><b>OARS WEEL (United States, 4/2022). Skin sensitizer.</b>          TWA: 10 ppm 8 hours.</p>
Ethylbenzene	100-41-4	<p><b>CA Alberta Provincial (Canada, 3/2023).</b>          OEL: 100 ppm 8 hours.          OEL: 434 mg/m<sup>3</sup> 8 hours.          OEL: 543 mg/m<sup>3</sup> 15 minutes.          OEL: 125 ppm 15 minutes.  <b>CA British Columbia Provincial (Canada, 8/2023).</b>          TWA: 20 ppm 8 hours.  <b>CA Ontario Provincial (Canada, 6/2019).</b>          TWA: 20 ppm 8 hours.  <b>CA Quebec Provincial (Canada, 7/2023).</b>          TWAEV: 20 ppm 8 hours.  <b>CA Saskatchewan Provincial (Canada, 7/2013).</b>          STEL: 125 ppm 15 minutes.          TWA: 100 ppm 8 hours.</p>
Petroleum refining, hydrotreated light distillate	64742-47-8	<p><b>CA British Columbia Provincial (Canada, 8/2023). [Kerosene/Jet fuels] Absorbed through skin. Notes: Application restricted to conditions in which there are negligible aerosol exposures.</b></p>

## Section 8. Exposure controls/personal protection

Petroleum refining, hydrotreated light distillate	64742-47-8	<p>TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapour) 8 hours.  <b>CA Alberta Provincial (Canada, 3/2023). [Kerosene/Jet fuels] Absorbed through skin.</b></p> <p>OEL: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapour) 8 hours.  <b>CA Ontario Provincial (Canada, 6/2019). Absorbed through skin.</b></p> <p>TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapour) 8 hours.  <b>CA Quebec Provincial (Canada, 7/2023). [kerosene] Absorbed through skin.</b></p> <p>TWAEV: 200 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 8/2023). [Kerosene/Jet fuels] Absorbed through skin. Notes: Application restricted to conditions in which there are negligible aerosol exposures.</b></p> <p>TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapour) 8 hours.  <b>CA Alberta Provincial (Canada, 3/2023). [Kerosene/Jet fuels] Absorbed through skin.</b></p> <p>OEL: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapour) 8 hours.  <b>CA Ontario Provincial (Canada, 6/2019). Absorbed through skin.</b></p> <p>TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapour) 8 hours.  <b>CA Quebec Provincial (Canada, 7/2023). [kerosene] Absorbed through skin.</b></p> <p>TWAEV: 200 mg/m<sup>3</sup> 8 hours.</p>
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**Occupational exposure limits (Mexico)**

<b>Ingredient name</b>	<b>CAS #</b>	<b>Exposure limits</b>
Methyl Acetate	79-20-9	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 200 ppm 8 hours. STEL: 250 ppm 15 minutes.
Toluene	108-88-3	<b>NOM-010-STPS-2014 (Mexico, 4/2016).</b> TWA: 20 ppm 8 hours.
Hexane	110-54-3	<b>NOM-010-STPS-2014 (Mexico, 4/2016). Absorbed through skin.</b> TWA: 50 ppm 8 hours.
Xylene, mixed isomers	1330-20-7	<b>NOM-010-STPS-2014 (Mexico, 4/2016). [Xileno, mezcla]</b> STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.

**Biological exposure indices (United States)**

## Section 8. Exposure controls/personal protection

Ingredient name	Exposure indices
Toluene	<p><b>ACGIH BEI (United States, 7/2023)</b>                      BEI: 0.03 mg/l, toluene [in urine]. Sampling time: end of shift.                      BEI: 0.3 mg/g creatinine, o-cresol [in urine]. Sampling time: end of shift.                      BEI: 0.02 mg/l, toluene [in blood]. Sampling time: prior to last shift of workweek.</p>
Hexane	<p><b>ACGIH BEI (United States, 7/2023)</b>                      BEI: 0.5 mg/l, 2,5-hexanedion [in urine]. Sampling time: end of shift.</p>
Xylene, mixed isomers	<p><b>ACGIH BEI (United States, 7/2023) [xylenes (technical or commercial grades)]</b>                      BEI: 0.3 g/g creatinine, methylhippuric acids [in urine]. Sampling time: end of shift.</p>
Ethylbenzene	<p><b>ACGIH BEI (United States, 7/2023)</b>                      BEI: 0.15 g/g creatinine, sum of mandelic acid and phenylglyoxylic acid [in urine]. Sampling time: end of shift.</p>

**Biological exposure indices (Canada)**

No exposure indices known.

**Biological exposure indices (Mexico)**

Ingredient name	Exposure indices
Toluene	<p><b>Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012)</b>                      BEI: 0.05 mg/L, toluene [in blood]. Sampling time: sample time not specified.                      BEI: 1.6 g/g creatinine [Basal level. The determinant may be present in the biological sample obtained from subjects who have not been occupationally exposed, at a concentration that could affect the interpretation of the results. These background levels are included in the value; non-specific. The determinant is nonspecific, since it can be found after exposure to other chemicals.], hippuric acid [in urine]. Sampling time: at the end of the work shift.                      BEI: 0.5 mg/L [Basal level. The determinant may be present in the biological sample obtained from subjects who have not been occupationally exposed, at a concentration that could affect the interpretation of the results. These background levels are included in the value], o-cresol [in urine]. Sampling time: at the end of the work shift.</p>
Hexane	<p><b>Official Mexican STANDARD NOM-</b></p>

## Section 8. Exposure controls/personal protection

Xylene, mixed isomers

**047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012)**

BEI: 0.4 mg/L, 2,5-hexanedione [in urine].  
Sampling time: at the end of the shift at the end of the work week.

**Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012) [xylenes (technical or commercial grade)]**

BEI: 1.5 g/g creatinine, methyl hippuric acids [in urine]. Sampling time: at the end of the work shift.

**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** : **This product contains a component that is either subject to a CEPA ministerial condition or an existing/proposed SNAC (Significant New Activity).**  
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. Contaminated work clothing should not be allowed out of the workplace. 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.

## Section 8. Exposure controls/personal protection

- 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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : Liquid.
- Color** : Orange.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 9.1 (butyl acetate = 1)
- Flammability** : Flammable aerosol.
- Lower and upper explosion limit/flammability limit** : Lower: 0.9%  
Upper: 16%
- Vapor pressure** : 101.3 kPa (760 mm Hg)
- Relative vapor density** : 1.55 [Air = 1]
- Relative density** : 0.92
- Solubility(ies)** :

Media	Result
cold water	Not soluble

- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <20.5 mm<sup>2</sup>/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 23.993 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
Methyl Acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
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
	Hexane	LC50 Inhalation Gas.	Rat	48000 ppm
		LD50 Oral	Rat	15840 mg/kg
Xylene, mixed isomers	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Methyl Acetate	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 mg	-
	Eyes - Mild irritant	Rabbit	-	870 ug	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Pig	-	24 hours 250 uL	-
	Skin - Mild irritant	Rabbit	-	435 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-
Hexane	Eyes - Mild irritant	Rabbit	-	10 mg	-
	Xylene, mixed isomers	Eyes - Mild irritant	Rabbit	-	87 mg
Eyes - Severe irritant		Rabbit	-	24 hours 5	-

# Section 11. Toxicological information

Methyl Ethyl Ketoxime Ethylbenzene	Skin - Mild irritant	Rat	-	mg	-
	Skin - Moderate irritant	Rabbit	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
	Eyes - Severe irritant	Rabbit	-	24 hours 500	-
	Eyes - Severe irritant	Rabbit	-	mg	-
	Skin - Mild irritant	Rabbit	-	100 uL	-
				500 mg	-
				24 hours 15	-
				mg	-

**Sensitization**

Not available.

**Mutagenicity**

Not available.

**Carcinogenicity**

Not available.

**Classification**

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-
Xylene, mixed isomers	-	3	-
Ethylbenzene	-	2B	-

**Reproductive toxicity**

Not available.

**Teratogenicity**

Not available.

**Specific target organ toxicity (single exposure)**

Name	Category	Route of exposure	Target organs
Methyl Acetate	Category 3	-	Narcotic effects
Toluene	Category 3	-	Narcotic effects
Lt. Aliphatic Hydrocarbon Solvent	Category 3	-	Narcotic effects
Hexane	Category 3	-	Narcotic effects
Xylene, mixed isomers	Category 3	-	Respiratory tract irritation
2-Methylpentane	Category 3	-	Narcotic effects
3-Methylpentane	Category 3	-	Narcotic effects
2,3-Dimethylbutane	Category 3	-	Narcotic effects
Methyl Ethyl Ketoxime	Category 1	-	upper respiratory tract
Ethylbenzene	Category 3	-	Narcotic effects
Light Aliphatic Hydrocarbon	Category 3	-	Narcotic effects

**Specific target organ toxicity (repeated exposure)**

# Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Toluene	Category 2	-	-
Hexane	Category 2	-	-
Xylene, mixed isomers	Category 2	-	-
Methyl Ethyl Ketoxime	Category 2	-	blood system
Ethylbenzene	Category 2	-	-

## Aspiration hazard

Name	Result
Toluene	ASPIRATION HAZARD - Category 1
Lt. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Hexane	ASPIRATION HAZARD - Category 1
Xylene, mixed isomers	ASPIRATION HAZARD - Category 1
2-Methylpentane	ASPIRATION HAZARD - Category 1
3-Methylpentane	ASPIRATION HAZARD - Category 1
2,3-Dimethylbutane	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	ASPIRATION HAZARD - Category 1
Light Aliphatic Hydrocarbon	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.

**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.

**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

# Section 11. Toxicological information

**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. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : May damage 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	329417.51 mg/kg
Dermal	158091.07 mg/kg

# Section 12. Ecological information

**Toxicity**

Product/ingredient name	Result	Species	Exposure
Methyl Acetate Toluene	Acute LC50 320000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute EC50 >433 ppm Marine water	Algae - <i>Skeletonema costatum</i>	96 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - <i>Gammarus pseudolimnaeus</i> - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
Lt. Aliphatic Hydrocarbon Solvent Hexane	Acute LC50 5500 µg/l Fresh water	Fish - <i>Oncorhynchus kisutch</i> - Fry	96 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
	Acute LC50 >100000 ppm Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Acute LC50 2500 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours

## Section 12. Ecological information

Xylene, mixed isomers	Acute LC50 8500 µg/l Marine water	Crustaceans - <i>Palaemonetes pugio</i>	48 hours
Methyl Ethyl Ketoxime Ethylbenzene	Acute LC50 13400 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute LC50 843000 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Acute EC50 4900 µg/l Marine water	Algae - <i>Skeletonema costatum</i>	72 hours
	Acute EC50 7700 µg/l Marine water	Algae - <i>Skeletonema costatum</i>	96 hours
	Acute EC50 6.53 mg/l Marine water	Crustaceans - <i>Artemia sp.</i> - Nauplii	48 hours
Light Aliphatic Hydrocarbon Light Aliphatic Hydrocarbon	Acute EC50 2.93 mg/l Fresh water	Daphnia - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Acute LC50 2200 µg/l Fresh water	Fish - <i>Lepomis macrochirus</i>	4 days
	Acute LC50 2200 µg/l Fresh water	Fish - <i>Lepomis macrochirus</i>	4 days

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily
Xylene, mixed isomers	-	-	Readily
Ethylbenzene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	Low
Lt. Aliphatic Hydrocarbon Solvent	-	10 to 2500	High
Hexane	-	501.187	High
Xylene, mixed isomers	-	8.1 to 25.9	Low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	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** : **This product contains a component that is either subject to a CEPA ministerial condition or an existing/proposed SNAC (Significant New Activity).**

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 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	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 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	-  <b>ERG No.</b> 126 Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	-  Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	<b>Emergency schedules</b> F-D, S-U  Dependent upon container size, this product may ship under the Limited Quantity shipping exception.

**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 IMO instruments** : Not available.

**Proper shipping name** : Not available.

## Section 15. Regulatory information

This product contains a component that is either subject to a CEPA ministerial condition or an existing/proposed SNAC (Significant New Activity).

**International regulations**

**Montreal Protocol**

Not listed.

# Section 15. Regulatory information

## Stockholm Convention on Persistent Organic Pollutants

Not listed.

- International lists** :
- Australia inventory (AIIIC):** Not determined.
  - China inventory (IECSC):** Not determined.
  - Japan inventory (CSCL):** Not determined.
  - Japan inventory (ISHL):** Not determined.
  - Korea inventory (KECI):** Not determined.
  - New Zealand Inventory of Chemicals (NZIoC):** Not determined.
  - Philippines inventory (PICCS):** Not determined.
  - Taiwan Chemical Substances Inventory (TCSI):** Not determined.
  - Thailand inventory:** Not determined.
  - Turkey inventory:** Not determined.
  - Vietnam inventory:** Not determined.

# Section 16. Other information

## Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		4
Physical hazards		3

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	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 1B	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** : 5/14/2024
- Date of issue/Date of revision** : 5/14/2024
- Date of previous issue** : 1/21/2024
- Version** : 26

## 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)
- N/A = Not available
- SGG = Segregation Group
- UN = United Nations

✔ Indicates information that has changed from previously issued version.

### 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 the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. 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 California CARB Compliant

### 1 - Identification

<p><b>Product Name:</b> WD-40 Multi-Use Product Aerosol</p> <p><b>Product Use:</b> Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion</p> <p><b>Restrictions on Use:</b> None identified</p> <p><b>SDS Date Of Preparation:</b> August 2, 2021</p>	<p><b>Manufacturer:</b> WD-40 Company</p> <p><b>Address:</b> 9715 Businesspark Avenue San Diego, California, USA 92131</p> <p><b>Telephone:</b></p> <p><b>Emergency:</b> 1-888-324-7596</p> <p><b>Information:</b> 1-888-324-7596</p> <p><b>Chemical Spills:</b> 1-800-424-9300 (Chemtrec) 1-703-527-3887 (International Calls)</p>
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### 2 – Hazards Identification

**Hazcom 2012/GHS Classification:**

Flammable Aerosol Category 1

Gas Under Pressure: Compressed Gas

Aspiration Toxicity Category 1

Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

**Label Elements:**



**DANGER!**

Extremely Flammable Aerosol.

Contains gas under pressure; may explode if heated.

May be fatal if swallowed and enters airways.

May cause drowsiness or dizziness.

**Prevention**

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.

Avoid breathing vapors or mists.

Use only outdoors or in a well-ventilated area.

**Response**

IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

**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 local and national regulations.

### 3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
LVP Aliphatic Hydrocarbon	64742-47-8	45-50%	Aspiration Toxicity Category 1
Petroleum Base Oil	64742-56-9 64742-65-0 64742-53-6 64742-54-7 64742-71-8	<35%	Not Hazardous
Aliphatic Hydrocarbon	64742-47-8	<25%	Flammable Liquid Category 3 Aspiration Toxicity Category 1 Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)
Carbon Dioxide	124-38-9	2-3%	Simple Asphyxiant Gas Under Pressure, Compressed Gas

Note: The specific chemical identity and exact percentages are a trade secret.

### 4 – First Aid Measures

**Ingestion (Swallowed):** Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

**Eye Contact:** Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.

**Skin Contact:** Wash with soap and water. If irritation develops and persists, get medical attention.

**Inhalation (Breathing):** If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

**Signs and Symptoms of Exposure:** Harmful or fatal if swallowed. Aspiration of liquid into the lungs during swallowing or vomiting may cause lung damage. May cause eye and respiratory irritation. Inhalation of mists or vapors may cause drowsiness, dizziness and other nervous system effects. Skin contact may cause drying of the skin.

**Indication of Immediate Medical Attention/Special Treatment Needed:** Immediate medical attention is needed for ingestion.

### 5 – Fire Fighting Measures

**Suitable (and unsuitable) Extinguishing Media:** Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.

**Specific Hazards Arising from the Chemical:** Extremely flammable aerosol. Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.

**Special Protective Equipment and Precautions for Fire-Fighters:** Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

### 6 – Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.

**Methods and Materials for Containment/Cleanup:** Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

### 7 – Handling and Storage

**Precautions for Safe Handling:** Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area, away from incompatible materials. Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

### 8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
LVP Aliphatic Hydrocarbon	1200 mg/m <sup>3</sup> TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m <sup>3</sup> TWA (Inhalable) ACGIH TLV (as Mineral oil) 5 mg/m <sup>3</sup> TWA OSHA PEL (as Oil mist, mineral)
Aliphatic Hydrocarbon	1200 mg/m <sup>3</sup> TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA, 30,000 ppm STEL ACGIH TLV 5000 ppm TWA OSHA PEL

### The Following Controls are Recommended for Normal Consumer Use of this Product

**Appropriate Engineering Controls:** Use in a well-ventilated area.

**Personal Protection:**

**Eye Protection:** Avoid eye contact. Always spray away from your face.

**Skin Protection:** Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

**Respiratory Protection:** None needed for normal use with adequate ventilation.

### For Bulk Processing or Workplace Use the Following Controls are Recommended

**Appropriate Engineering Controls:** Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

**Personal Protection:**

**Eye Protection:** Safety goggles recommended where eye contact is possible.

**Skin Protection:** Wear chemical resistant gloves.

**Respiratory Protection:** None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.

**Work/Hygiene Practices:** Wash with soap and water after handling.

### 9 – Physical and Chemical Properties

Appearance:	Light green to amber liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8%
Odor:	Mild petroleum odor	Vapor Pressure:	95-115 PSI @ 70°F
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.8 – 0.82 @ 60°F
Melting/Freezing Point:	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	361 - 369°F (183 - 187°C)	Partition Coefficient; n-octanol/water:	Not established
Flash Point:	138°F (59°C) Tag Closed Cup (liquid)	Autoignition Temperature:	Not established
Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas):	Flammable Aerosol	Viscosity:	2.79-2.96 cSt @ 100°F
VOC:	24.1%	Pour Point:	-63°C (-81.4°F) ASTM

**10 – Stability and Reactivity****Reactivity:** Not reactive under normal conditions**Chemical Stability:** Stable**Possibility of Hazardous Reactions:** May react with strong oxidizers generating heat.**Conditions to Avoid:** Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.**Incompatible Materials:** Strong oxidizing agents.**Hazardous Decomposition Products:** Carbon monoxide and carbon dioxide.**11 – Toxicological Information****Symptoms of Overexposure:****Inhalation:** High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.**Skin Contact:** Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.**Eye Contact:** Contact may be irritating to eyes. May cause redness and tearing.**Ingestion:** This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.**Chronic Effects:** None expected.**Carcinogen Status:** None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.**Reproductive Toxicity:** None of the components is considered a reproductive hazard.**Numerical Measures of Toxicity:**

Acute Toxicity Estimates: Oral &gt; 5,000 mg/kg; Dermal &gt;2,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

**12 – Ecological Information****Ecotoxicity:** No specific aquatic toxicity data is currently available; however components of this product are not expected to be harmful to aquatic organisms**Persistence and Degradability:** Components are readily biodegradable.**Bioaccumulative Potential:** Bioaccumulation is not expected based on an assessment of the ingredients.**Mobility in Soil:** No data available**Other Adverse Effects:** None known**13 - Disposal Considerations**

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Do not puncture or incinerate containers, even empty. Dispose in accordance with federal, state, and local regulations.

**14 – Transportation Information**

DOT Surface Shipping Description: UN1950, Aerosols, 2.1 Ltd. Qty

(Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)

IMDG Shipping Description: UN1950, Aerosols, 2.1, LTD QTY

ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1

NOTE: WD-40 Company does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

## 15 – Regulatory Information

### U.S. Federal Regulations:

**CERCLA 103 Reportable Quantity:** This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

### SARA TITLE III:

**Hazard Category For Section 311/312:** Refer to Section 2 for the OSHA Hazard Classification.

**Section 313 Toxic Chemicals:** This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

**Section 302 Extremely Hazardous Substances (TPQ):** None

**EPA Toxic Substances Control Act (TSCA) Status:** All of the components of this product are listed on the TSCA inventory.

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):** This product does not require a California Proposition 65 warning.

**VOC Regulations:** This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.

**Canadian Environmental Protection Act:** All of the ingredients are listed on the Canadian Domestic Substances List or exempt from notification

## 16 – Other Information

### HMIS Hazard Rating:

**Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Physical Hazard – 0 (minimal hazard)**

Revision Date: August 2, 2021

Supersedes: March 5, 2019

Revision Summary: Section 9: Appearance

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA

Reviewed by: I. Kowalski

Regulatory Affairs Dept.

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