

## Basics SDS 2022

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## SAFETY DATA SHEET

### Diesel Fuel

#### 1. IDENTIFICATION

Product Identifier Diesel Fuel

Synonyms: Diesel Fuel, Motor Vehicle Diesel Fuel, Dyed Diesel, \* DieselOne®, \* DieselOne® w/Platinum Plus DFX, Low Sulfur Diesel (LSD), Ultra Low Sulfur Diesel (ULSD)

Intended use of the product: Fuel

Contact: Global Companies LLC  
Water Mill Center  
800 South St.  
Waltham, MA 02454-9161  
[www.globalp.com](http://www.globalp.com)

Contact Information: EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300  
COMPANY CONTACT (business hours): 800-542-0778

#### 2. HAZARD IDENTIFICATION

According to OSHA 29 CFR 1910.1200 HCS

##### Classification of the Substance or Mixture

Classification (GHS-US):

Flam. Liquid	Category 3	H226
Skin Corrosion/Irritation	Category 2	H315
Aspiration Hazard	Category 1	H304
STOT SE	Category 3	H336
Carcinogenicity	Category 2	H350
Aquatic Chronic	Category 2	H411
Serious Eye Damage/ Irritation	Category 2B	H319

##### Labeling Elements



Signal Word (GHS-US):

Hazard Statements (GHS-US):

##### **Danger**

H226 – Flammable liquid and vapor.

H315 – Causes Skin irritation.

H304 – May be fatal if swallowed and enters airways.

H336 – May cause drowsiness or dizziness.

H350 – May cause cancer.

H411 – Toxic to aquatic life with long lasting effects.

H319 – May cause eye damage/irritation.

Precautionary Statements (GHS-US):

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 - Keep container tightly closed.

P240 – Ground/bond container and receiving equipment.



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P241 – Use explosion-proof electrical/ventilating/lighting equipment pursuant to applicable electrical code.  
P242 – Use only non-sparking tools.  
P243 – Take precautionary measures against static discharge.  
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 – Wash skin thoroughly after handling.  
P271 – Use only outdoors or in a well-ventilated area.  
P273 – Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P303+361+353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse with water/shower.  
P308+311 - If exposed or concerned: Get medical advice/attention.  
P301+310 - If swallowed: Immediately call a poison center/doctor/...  
P331 - Do NOT induce vomiting.  
P370+P378 – In case of fire use firefighting foam or other appropriate media for Class B fires to extinguish.  
P403+235 - Store in a well-ventilated place. Keep cool.  
P405 - Store locked up.  
P501 – Dispose of contents/container in accordance with local/regional/national/international regulation.

#### Other information:

NFPA 704  
Health: 1  
Fire: 2  
Reactivity: 0



### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Chemical Composition Information

Mixture

Name	Product Identifier (CAS#)	% (w/w)	Classification
Diesel Fuel	68476-34-6	100	Flam Liq. 3, H226; Skin Irrit. 2, H315; Aspiration 1, H304; STOT SE 3, H336; Carc.2. H350; Aquatic chronic 2, H411
Naphthalene	91-20-3	<0.1	Carc. 2, H351; Acute Tox. 4, H302; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

#### Additional Formulation Information:

Diesel Fuel consists of C9+ hydrocarbons resulting from distillation of crude oil.

Low Sulfur Diesel Fuel typically contains less than 500 ppm of sulfur

Ultra Low Sulfur Diesel Fuel typically contains less than 15 ppm of sulfur

### 4. FIRST AID MEASURES

Route	Measures
Inhalation	Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.



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Route	Measures
Ingestion	Aspiration Hazard: DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Ingestion may cause gastrointestinal disturbances including irritation, nausea, vomiting, and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory failure, and death.
Eye Contact	In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention. In case of contact lenses, remove immediately.
Skin Contact	Remove contaminated clothing and shoes. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and of the area of the body burned.

#### Most Important Symptoms

Contact with eyes and face may cause irritation. Long-term exposure may cause dermatitis (itching, irritation, pain and swelling).

Inhalation may cause irritation and significant or long term exposure could cause respiratory insufficiency and pulmonary edema.

Ingestion may cause aspiration, gastrointestinal disturbance, and CNS effects.

#### Immediate Medical Attention and Special Treatment

For contact with skin or eyes, immediately wash or flush contaminated eyes with gently flowing water. If possible, irrigate each eye continuously with 0.9% saline (NS). If ingested, rinse mouth. Do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

If inhaled, administer oxygen or establish a patent airway if breathing is labored. Suction if necessary. Monitor closely, anticipate seizures. Consider orotracheal or nostracheal intubation of airway control if patient is unconscious or is in severe respiratory distress.

Discard any clothing or shoes contaminated as they may be flammable.

## 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

Foam, carbon dioxide, dry chemical are most suitable

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO<sub>2</sub>, water spray, firefighting foam, or Halon. Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other firefighting equipment.

LARGE FIRES: Foam, carbon dioxide, dry chemical. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

#### Specific Hazards / Products of Combustion

Moderate fire hazard when exposed to heat or flame with a very low flash point. Product is flammable and easily ignited when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Combustion may produce smoke, carbon monoxide and other products of incomplete combustion.

#### Special Precautions and Protective Equipment for Firefighters

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied firefighting foam.



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#### **Fighting Equipment/Instructions**

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH- approved pressure-demand self-contained breathing apparatus with full face piece and protective clothing.

Refer to Section 9 for fire properties of this chemical including flash point, auto ignition temperature, and explosive limits.

## **6. ACCIDENTAL RELEASE MEASURES**

**ACTIVATE FACILITY SPCC, SPILL CONTINGENCY or EMERGENCY PLAN.**

#### **Personal Precautions**

Due to high vapor density, flammable / toxic vapors may be present in low lying areas, dikes, pits, drains, or trenches. Vapors may accumulate in low lying areas and reach ignitable concentrations. Ventilate the area. Use of non-sparking tools and intrinsically safe equipment is recommended. Potential for flammable atmosphere should be monitored using a combustible gas indicator positioned downwind of the spill area. Refer to Sections 2 and 7 for further hazard warnings and handling instructions.

Use appropriate personal protective equipment to prevent eye/skin contact and absorption. Use NIOSH approved respiratory protection, if warranted, to prevent exposures above permissible limits. Refer to Section 8. Contaminated clothing should not be near sources of ignition.

#### **Emergency Measures**

As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Consider wind direction. Secure all ignition sources (flame, spark, hot work, hot metal, etc.) from area. Evaluate the direction of product travel, diking sewers, etc. to confirm spill areas. Do not touch or walk-through spilled material. For large spills, isolate initial action distance downwind 1,000 ft. (300 m).

#### **Environmental Precautions**

Stop the spill to prevent environmental release if it can be done safely. Product is toxic to aquatic life. Take action to isolate environmental receptors including drains, storm sewers and natural water bodies. Keep on impervious surface if at all possible. Use water sparingly to prevent product from spreading. Foam and absorbents may be used to reduce / prevent airborne release.

Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Follow federal, state or local requirements for reporting environmental release where necessary. Refer to Section 15 for further information.

#### **Containment and Clean-Up Methods**

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of firefighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with dry earth, sand or other non-combustible, inert oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container with clean, non-sparking tools for reclamation or disposal. Response and cleanup crews must be properly trained and must utilize proper protective equipment. Refer to Section 8 for appropriate protective equipment.

## **7. HANDLING AND STORAGE**

**USE ONLY AS A FUEL.**

**DO NOT SIPHON BY MOUTH.**

#### **Handling Precautions**

Handle as a flammable liquid. Keep away from heat, sparks, and open flame. No smoking. Electrical equipment should be approved for classified area. Bond and ground containers during product transfer pursuant to NFPA 70 and API RP 2003 to reduce the possibility of static-initiated fire or explosion. Follow precautions to prevent static initiated fire.

Use good personal hygiene practices. Use only with protective equipment specified in Section 8. Avoid repeated and/or prolonged skin exposure. Use only outdoors or in well ventilated areas. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this



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product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API RP 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

#### Storage

Large quantities of diesel fuel are stored in tanks or portable containers at an ambient storage temperature. Separate from incompatible chemicals (Refer to Section 10) by distance or secondary containment. Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers that are clearly labeled. Label all secondary containers that this material is transferred into with the chemical name and associated hazard(s). Empty product containers or vessels may contain flammable vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Storage tanks should have a venting system. If stored in small containers, the area should be well ventilated, away from ignition sources and protected from potential damage or vehicular traffic. Post "No Smoking" signs in product storage areas. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code" or applicable building code. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks in Flammable and Combustible Liquid Service" and API RP 2015 "Safe Entry and Cleaning of Petroleum Storage Tanks".

#### Incompatibles

Keep away from strong oxidizers, ignition sources and heat.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Occupational Exposure Limits

Component	CAS #	List	Value
Diesel Fuel	68476-34-6	ACGIH TLV-TWA	100 mg/m <sup>3</sup> *
Naphthalene	91-20-3	ACGIH TLV-TWA OSHA PEL ACGIH STEL	10 ppm 10 ppm 15 ppm

\*Critical effects; Skin; A3; CNS impairment.

#### Engineering Controls

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Intrinsically safe equipment and non-sparking tools shall be used in circumstances where concentrations may exceed lower flammable limits. Grounding and bonding shall be used to prevent accumulation and discharge of static electricity. Emergency shower and eyewash should be provided in proximity to handling areas in the event of exposure to decontaminate.

#### Personal Protective Equipment

Exposure	Equipment
Eye / Face	Wear appropriate chemical protective glasses or goggles or face shields to prevent skin and eye contact especially caused from splashing.
Skin	Wear appropriate personal protective clothing to prevent skin contact. Gloves constructed of nitrile, neoprene or PVC are recommended when handling this material. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure.



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Exposure	Equipment
Respiratory	<p>A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations.</p> <p>Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.</p>
Thermal	<p>Product is stored at ambient temperature. No thermal protection is required except for emergency operations involving actual or potential for fire. Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.</p>

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Clear or straw-colored liquid. May be dyed red for distribution.
Odor	Mild characteristic petroleum distillate odor.
Odor Threshold	<1 ppm
pH	Not available
Melting Point	-22 to -0.4 °F (-30 to -18 °C)
Boiling Point Range	320 to 690 °F (160 to 366 °C)
Flash Point	> 125.6 °F (52 °C) PMCC
Evaporation Rate	Slow, varies with conditions
Flammability	Flammable liquid (OSHA defined)
Flammable Limits	0.6 % - 6.5%
Vapor Pressure	0.009 psia @ 70 °F
Vapor Density	> 1 (air=1)
Specific Gravity	0.83-0.86 @ 60 °F (16 °C) (water=1)
Solubility	Insoluble in water; miscible with other petroleum solvents.
Partition Coefficient (N-octanol/water)	Log Kow range of 3.3 to >6.0
Autoignition Temperature	494 °F (257 °C)
Decomposition Temperature	When heated it emits acrid smoke and irritating vapors.
Viscosity	<3 cSt
Percent Volatiles	100

## 10. STABILITY AND REACTIVITY

### Stability

This is a stable material that is flammable liquid (OSHA/GHS hazard category 3). Stable during transport.

### Reactivity

Material is not self-reacting. Flammable concentrations may be present in air. Compound can react with oxidizing materials.



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#### Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

#### Incompatibility

Keep away from strong oxidizers such as nitric and sulfuric acids.

#### Conditions to Avoid

Avoid high temperatures, open flames, sparks, static electricity, welding, smoking and other ignition sources.

#### Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

## 11. TOXICOLOGICAL INFORMATION

#### Acute Toxicity:

##### Acute Toxicity (Inhalation LC50)

Diesel Fuel (68476-34-6)

LC50 Inhalation Rat >6 mg/l/4h

##### Acute Toxicity (Dermal LD50)

Diesel Fuel (68476-34-6)

LD50 Dermal Rabbit >5000 mg/kg

##### Acute Toxicity (Oral LD50)

Diesel Fuel (68476-34-6)

LD50 Oral Rabbit >5000 mg/kg

Skin Corrosion/Irritation: Prolonged and repeated contact may cause skin irritation leading to dermatitis. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

Serious Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: OSHA: NO, IARC: Group 3, NTP: NO, ACGIH: NOIC:A3, NIOSH: NO

IARC: Group 3 – Not classifiable as to their carcinogenicity to humans ACGIH: A3 – Confirmed animal carcinogen with unknown relevance to humans

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

IARC classifies whole diesel fuel exhaust particulates (byproduct of combustion of this material) carcinogenic to humans (Group 1) and NIOSH regards diesel fuel exhaust particulate as a potential occupational carcinogen.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Specific Target Organ Toxicity (Single Exposure): Inhalation exposure may cause drowsiness or dizziness by inhalation exposure.

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

Potential Health Effects: Vapor irritating to skin, eyes, nose, and throat. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of





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combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

## 12. ECOLOGICAL INFORMATION

### Toxicity:

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

### Data for Component: Diesel Fuel (68476-34-6)

Material is toxic to aquatic organisms based on an acute basis (LC50/EC50 >1 but  $\leq$  10 mg/L in the most sensitive species tested).

Material is a long-term aquatic hazard based on a chronic basis (LC50/EC50 >1 but  $\leq$  10 mg/L in the most sensitive species tested).

Persistence and Degradation: This material is not expected to be readily biodegradable.

Bioaccumulative Potential: Not available

Mobility in Soil: Not available

Other Adverse Effects: None known

Other Information: Avoid release to the environment.

## 13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options. May be considered a hazardous waste if disposed. Direct solid waste (landfill) or incineration at a solid waste facility is not permissible. Do not discharge to sanitary or storm sewer. Personnel handling waste containers should follow precautions provided in this document.

Shipping containers must be DOT authorized packages. Follow licensure and regulations for transport of hazardous material and hazardous waste as applicable.

## 14. TRANSPORT INFORMATION

### US DOT

UN Identification Number	NA 1993
Proper Shipping Name	Diesel fuel
Hazard Class and Packing Group	3, PGIII
Shipping Label	Flammable liquid
Placard / Bulk Package	Flammable liquid, 1993
Emergency Response Guidebook Guide Number	128

This product may be re-classified as a "Combustible Liquid" meeting the definition in 49 CFR 173.120 unless transported by vessel or aircraft.

Specific placard requirements must be met for shipments of this product as a Combustible Liquid by rail (See 49 CFR 172.332).

Non-bulk packages ( $\leq$  119 gal) of Combustible Liquids in package sizes less than the product reportable quantity are not regulated as hazardous materials if the material does not meet any other hazard class.

### IATA Information

UN Identification Number	UN 1202
Proper Shipping Name	Diesel fuel
Hazard Class and Packing Group	3, PGIII
ICAO Label	3
Packing Instructions Cargo	310
Max Quantity Per Package Cargo	220L
Packing Instructions Passenger	309Y
Max Quantity per Package Passenger	60L



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#### ICAO

UN Identification Number	UN 1202
Shipping Name / Description	Diesel fuel
Hazard Class and Packing Group	3, PG III
IMDG Label	3

#### IMDG

UN Identification Number	UN 1202
Shipping Name / Description	Diesel fuel
Hazard Class and Packing Group	3, PGIII
IMDG Label	3
EmS Number	F-E-S-E
Marine Pollutant	Yes

## 15. REGULATORY INFORMATION

#### U.S. Federal, State, and Local Regulatory Information

Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

#### OSHA Hazard Communication Standard

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

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

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

#### Clean Water Act (Oil Spills)

Any spill or release of this product to "navigable waters" (Essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

#### CERCLA Section 103 and SARA Section 304 (Release to the Environment)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts this material. This product does not contain any chemicals subject to the reporting requirements of CERCLA Section 103 or SARA 304.

#### SARA Section 313- Supplier Notification

This product does not contain any chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

#### EPA Notification (Oil Spills)

If there is a discharge of more than 1,000-gallons of oil into or upon navigable waters of the United States, or if it is the second spill event of 42 gallons or more of oil into water within a twelve (12) month period, a written report must be submitted to the Regional Administrator of the EPA within sixty days of the event.

#### Pennsylvania Right to Know Hazardous Substance list:

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

Component	CAS	Amount
Diesel Fuel	68476-34-6	100%



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#### New Jersey Right to Know Hazardous Substance list:

The following product components are cited in the New Jersey Right to Know Hazardous Substance List, and are present at levels which require reporting.

Component	CAS	Amount
Diesel Fuel	68476-34-6	100%

#### California Proposition 65 WARNING: This product contains chemicals known to the State of California to cause Cancer or Reproductive Toxicity.

Component	CAS	Amount
Naphthalene	91-20-3	<0.1%

#### U.S. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

#### CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

#### Canadian Regulatory Information (WHMIS)

Class B3 – Combustible Liquid

Class D2A – Materials causing other toxic effects. (Very Toxic)

## 16. OTHER INFORMATION

Version	5
Issue Date	June 26, 2019
Prior Issue Date	May 20, 2016

#### Description of Revisions

Update viscosity information in Section 9. Update transportation information in Section 14 to clarify US DOT re-classification option as a Combustible Liquid.

#### Abbreviations

°F	Degrees Fahrenheit (temperature)	mL	Milliliter
<	Less than	mm <sup>2</sup>	Square millimeters
=	Equal to	mmHg	Millimeters of mercury (pressure)
>	Greater than	N/A	Not applicable
AP	Approximately	N/D	Not determined
C	Centigrade (temperature)	ppm	Parts per million
kg	Kilogram	sec	Second
L	Liter	ug	Micrograms
mg	Milligrams		

#### Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists	CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
AIHA	American Industrial Hygiene Association	DOT	U.S. Department of Transportation
AL	Action Level	EC50	Ecological concentration 50%
ANSI	American National Standards Institute	EPA	U.S. Environmental Protection Agency
API	American Petroleum Institute	ERPG	Emergency Response Planning Guideline
CAS	Chemical Abstract Service	GHS	Global Harmonized System



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HMIS	Hazardous Materials Information System	REL	Recommended Exposure Limit (NIOSH)
IARC	International Agency for Research On Cancer	RVP	Reid Vapor Pressure
IATA	International Air Transport Association	SARA	Superfund Amendments and
IMDG	International Maritime Dangerous Goods	SCBA	Self Contained Breathing Apparatus
Koc	Soil Organic Carbon	SPCC	Spill Prevention, Control, and
LC50	Lethal concentration 50%		Countermeasures
LD50	Lethal dose 50%	STEL	Short Term Exposure Limit (generally 15
MSHA	Mine Safety and Health Administration		minutes)
NFPA	National Fire Protection Association	TLV	Threshold Limit Value (ACGIH)
NIOSH	National Institute of Occupational Safety and	TSCA	Toxic Substances Control Act
	Health	TWA	Time Weighted Average (8 hr.)
NOIC	Notice of Intended Change	UN	United Nations
NTP	National Toxicology Program	UNECE	United Nations Economic Commission for
OPA	Oil Pollution Act of 1990		Europe
OSHA	U.S. Occupational Safety & Health	WEEL	Workplace Environmental Exposure Level
	Administration		(AIHA)
PEL	Permissible Exposure Limit (OSHA)	WHMIS	Canadian Workplace Hazardous Materials
RCRA	Resource Conservation and Recovery Act		Information System
	Reauthorization Act of 1986 Title III		

#### **Disclaimer of Expressed and Implied Warranties**

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

**\*\* End of Safety Data Sheet \*\***



# SAFETY DATA SHEET

## 1. Identification

Product identifier	UNLEADED GASOLINE
Other means of identification	
SDS number	002-GHS
Synonyms	Regular/Premium/Midgrade - Unleaded Gasoline, RFG - Reformulated Unleaded Gasoline, Conventional Unleaded Gasoline, Oxygenated Unleaded Gasoline, Non-Oxygenated Unleaded Gasoline, CARB (California Air Resource Board) Unleaded Gasoline, RBOB - Reformulated Blendstock for Oxygenate Blending, CBOB - Conventional Blendstock for Oxygenate Blending, Petrol, Motor Fuel. See section 16 for complete information.
Recommended use	Motor Fuel Motor fuels.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer/Supplier	Valero Marketing & Supply Company and Affiliates One Valero Way San Antonio, TX 78269-6000 210-345-4593 CorpHSE@valero.com
General Assistance	Industrial Hygienist
E-Mail	24 Hour Emergency 866-565-5220
Contact Person	1-800-424-9300 (CHEMTREC USA)
Emergency Telephone	

## 2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	
Label elements		



Signal word

Danger

Hazard statement

Extremely flammable liquid and vapor. Causes skin irritation. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause drowsiness or dizziness. May cause damage to organs (blood, liver, kidney) through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

**Precautionary statement****Prevention**

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

**Response**

If exposed or concerned: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. In case of fire: Use alcohol-resistant foam, carbon dioxide, dry powder or water fog for extinction. Collect spillage.

**Storage**

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

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)**

None known.

**3. Composition/information on ingredients****Mixtures**

Chemical name	CAS number	%
Gasoline	86290-81-5	80-100
Toluene	108-88-3	0-30
Hexane (Other Isomers)	96-14-0	5-25
Xylene (o, m, p isomers)	1330-20-7	0-25
Octane (All isomers)	111-65-9	0-18.5
Ethanol	64-17-5	0-10
1,2,4, Trimethylbenzene	95-63-6	0-6
n-Heptane	142-82-5	1-5
Pentane	109-66-0	1-5
Cumene	98-82-8	0-5
Ethylbenzene	100-41-4	0-5
Benzene	71-43-2	0-4.9
n-Hexane	110-54-3	0-3
Cyclohexane	110-82-7	0-3

**4. First-aid measures****Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

**Skin contact**

Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.

**Eye contact**

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

**Ingestion**

Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.

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

Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.

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

In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**

If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

## **5. Fire-fighting measures**

**Suitable extinguishing media**

Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media**

Do not use a solid water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

**Special protective equipment and precautions for firefighters**

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

**Fire-fighting equipment/instructions**

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.

**Specific methods**

Use water spray to cool unopened containers.

**General fire hazards**

Extremely flammable liquid and vapor. Containers may explode when heated.

## **6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.

**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Use non-sparking tools and explosion-proof equipment.

Small Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste.

Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system. Should not be released into the environment.

**Environmental precautions**

Gasoline may contain oxygenated blend products (Ethanol, etc.) that are soluble in water and therefore precautions should be taken to protect surface and groundwater sources from contamination. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Use compatible foam to minimize vapor generation as needed. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802.

## 7. Handling and storage

### Precautions for safe handling

Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.

### Conditions for safe storage, including any incompatibilities

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedings. Keep out of the reach of children.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Cumene (CAS 98-82-8)	PEL	245 mg/m3 50 ppm
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3 300 ppm
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3 1000 ppm
Ethylbenzene (CAS 100-41-4)	PEL	435 mg/m3 100 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3 500 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3 500 ppm
Octane (All isomers) (CAS 111-65-9)	PEL	2350 mg/m3 500 ppm
Pentane (CAS 109-66-0)	PEL	2950 mg/m3 1000 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	PEL	435 mg/m3 100 ppm

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
Benzene (CAS 71-43-2)	STEL	2.5 ppm



**US. ACGIH Threshold Limit Values**

Components	Type	Value
	TWA	0.5 ppm
Cumene (CAS 98-82-8)	TWA	50 ppm
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm
Gasoline (CAS 86290-81-5)	STEL	500 ppm
	TWA	300 ppm
Hexane (Other Isomers) (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm
Pentane (CAS 109-66-0)	TWA	600 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	125 mg/m3
		25 ppm
Benzene (CAS 71-43-2)	STEL	1 ppm
	TWA	0.1 ppm
Cumene (CAS 98-82-8)	TWA	245 mg/m3
		50 ppm
Cyclohexane (CAS 110-82-7)	TWA	1050 mg/m3
		300 ppm
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
		100 ppm
Hexane (Other Isomers) (CAS 96-14-0)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3
		100 ppm
n-Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
		85 ppm
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3
		50 ppm
Octane (All isomers) (CAS 111-65-9)	Ceiling	1800 mg/m3
		385 ppm
	TWA	350 mg/m3
		75 ppm
Pentane (CAS 109-66-0)	Ceiling	1800 mg/m3

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## US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Toluene (CAS 108-88-3)	TWA	610 ppm
		350 mg/m3
	STEL	120 ppm
		560 mg/m3
Xylene (o, m, p isomers) (CAS 1330-20-7)	TWA	150 ppm
		375 mg/m3
	STEL	100 ppm
		655 mg/m3
	TWA	150 ppm
		435 mg/m3
		100 ppm

### Biological limit values

#### ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*
Ethylbenzene (CAS 100-41-4)	0.7 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedione, without hydrolysis		*
	0.4 mg/l	2,5-Hexanedione, without hydrolysis	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*
Xylene (o, m, p isomers) (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

\* - For sampling details, please see the source document.

### Exposure guidelines

#### US - California OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Cumene (CAS 98-82-8)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies

Cumene (CAS 98-82-8)	Skin designation applies.
Toluene (CAS 108-88-3)	Skin designation applies.

#### US - Tennessee OELs: Skin designation

Cumene (CAS 98-82-8)	Can be absorbed through the skin.
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#### US ACGIH Threshold Limit Values: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.

## US. NIOSH: Pocket Guide to Chemical Hazards

Cumene (CAS 98-82-8)	Can be absorbed through the skin.
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#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Cumene (CAS 98-82-8)	Can be absorbed through the skin.
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### Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.
<b>Skin protection</b>	
<b>Hand protection</b>	Avoid exposure - obtain special instructions before use. Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.
<b>Respiratory protection</b>	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

<b>Appearance</b>	Light straw to red clear liquid with characteristic strong odor of gasoline.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Light straw to red clear.
<b>Odor</b>	Characteristic Gasoline Odor (Strong).
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	44.01 °F (6.67 °C) May start to solidify at this temperature. This is based on data for the following ingredient: Cyclohexane. Weighted average: -91.9 deg C (-133.4 deg F)
<b>Initial boiling point and boiling range</b>	80.06 - 440.06 °F (26.7 - 226.7 °C)
<b>Flash point</b>	-40.0 °F (-40.0 °C) (closed cup)
<b>Evaporation rate</b>	10 - 11 BuAc
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	1.3 %
<b>Flammability limit - upper (%)</b>	7.1 %
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	60.8 - 101.3 kPa (20°C)
<b>Vapor density</b>	3 - 4 (Air=1)
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Very slightly soluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	> 500 °F (> 260 °C)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

**Other information**

<b>Flash point class</b>	Flammable IA
<b>VOC (Weight %)</b>	100 %

**10. Stability and reactivity**

<b>Reactivity</b>	None known.
<b>Chemical stability</b>	Stable under normal temperature conditions and recommended use.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

<b>Ingestion</b>	Swallowing or vomiting of the liquid may result in aspiration into the lungs.
<b>Inhalation</b>	In high concentrations, mists/vapors may irritate throat and respiratory system and cause coughing. May cause drowsiness or dizziness.
<b>Skin contact</b>	Causes skin irritation. Prolonged contact may cause dryness of the skin.
<b>Eye contact</b>	May cause eye irritation.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.
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**Information on toxicological effects**

<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.
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<b>Components</b>	<b>Species</b>	<b>Test Results</b>
1,2,4, Trimethylbenzene (CAS 95-63-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 3160 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 2000 mg/l, 48 Hours
<i>Oral</i>		
LD50	Rat	6 g/kg
Benzene (CAS 71-43-2)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	3306 mg/kg
Cumene (CAS 98-82-8)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Mouse	2000 mg/l, 7 Hours
	Rat	8000 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	1400 mg/kg
Cyclohexane (CAS 110-82-7)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	12705 mg/kg

Components	Species	Test Results
Ethanol (CAS 64-17-5)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	30000 mg/m3
Ethylbenzene (CAS 100-41-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg
<i>Oral</i>		
LD50	Rat	5.46 g/kg
n-Heptane (CAS 142-82-5)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	103 mg/l, 4 Hours
n-Hexane (CAS 110-54-3)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	28710 mg/kg
Octane (All isomers) (CAS 111-65-9)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	118 mg/l, 4 Hours
Pentane (CAS 109-66-0)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	364 mg/l, 4 Hours
Toluene (CAS 108-88-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	14.1 ml/kg
<i>Inhalation</i>		
LC50	Rat	8000 mg/l, 4 Hours
<i>Oral</i>		
LD50	Rat	2.6 g/kg
Xylene (o, m, p isomers) (CAS 1330-20-7)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Rat	4300 mg/kg
<b>Skin corrosion/irritation</b>	Causes skin irritation.	
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met.	
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met. This substance may have a potential for sensitization which may provoke an allergic reaction among sensitive individuals.	
<b>Germ cell mutagenicity</b>	May cause genetic defects. In in-vitro experiments, neither benzene, toluene nor xylene changed the number of sister-chromatid exchanges (SCEs) or the number of chromosomal aberrations in human lymphocytes. However, toluene and xylene caused a significant cell growth inhibition which was not observed with benzene in the same concentrations. In in-vivo experiments, toluene changed the number of sister-chromatid exchanges (SCEs) in human lymphocytes. Toluene may cause heritable genetic damage.	

**Carcinogenicity** May cause cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Benzene (CAS 71-43-2)	1 Carcinogenic to humans.
Cumene (CAS 98-82-8)	2B Possibly carcinogenic to humans.
Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
Gasoline (CAS 86290-81-5)	2B Possibly carcinogenic to humans.
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.
Xylene (o, m, p isomers) (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.

**NTP Report on Carcinogens**

Benzene (CAS 71-43-2)	Known To Be Human Carcinogen.
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**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Benzene (CAS 71-43-2)	Cancer
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<b>Reproductive toxicity</b>	Suspected of damaging fertility or the unborn child. Benzene, xylene and toluene have demonstrated animal effects of reproductive toxicity. Animal studies of benzene have shown testicular effects, alterations in reproductive cycles, chromosomal aberrations and embryo/fetotoxicity. Ethanol has demonstrated human effects of reproductive toxicity. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Avoid exposure to women during early pregnancy. Avoid contact during pregnancy/while nursing.
<b>Specific target organ toxicity - single exposure</b>	May cause drowsiness or dizziness.
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to the following organs through prolonged or repeated exposure: Blood. Kidneys. Liver.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Chronic effects</b>	Repeated exposure of laboratory animals to high concentrations of gasoline vapors has caused kidney damage and cancer in rats and cancer in mice. Gasoline was evaluated for genetic activity in assays using microbial cells, cultured mammalian cells and rat bone marrow cells. The results were all negative so gasoline was considered nonmutagenic under these conditions. Overexposure to this product or its components has been suggested as a cause of liver abnormalities in laboratory animals and humans. Lifetime studies by the American Petroleum Institute have shown that kidney damage and kidney cancer can occur in male rats after prolonged inhalation exposures at elevated concentrations of total gasoline. Kidneys of mice and female rats were unaffected. The U.S. EPA Risk Assessment Forum has concluded that the male rat kidney tumor results are not relevant for humans. Total gasoline exposure also produced liver tumors in female mice only. The implication of these data for humans has not been determined.
<b>Further information</b>	Symptoms may be delayed.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Components		Species	Test Results
1,2,4, Trimethylbenzene (CAS 95-63-6)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	7.19 - 8.28 mg/l, 96 hours
Benzene (CAS 71-43-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	8.76 - 15.6 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	7.2 - 11.7 mg/l, 96 hours
Cumene (CAS 98-82-8)			
<b>Aquatic</b>			
Crustacea	EC50	Brine shrimp (Artemia sp.)	3.55 - 11.29 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.7 mg/l, 96 hours
Cyclohexane (CAS 110-82-7)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	3.961 - 5.181 mg/l, 96 hours
		Striped bass (Morone saxatilis)	8.3 mg/l, 96 hours

Components		Species	Test Results
Ethanol (CAS 64-17-5)			
Aquatic			
Algae	EC50	Freshwater algae	275 mg/l, 72 Hours
		Marine water algae	1970 mg/l
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
		Freshwater fish	11200 mg/l, 96 Hours
Invertebrate	EC50	Freshwater invertebrate	5012 mg/l, 48 Hours
		Marine water invertebrate	857 mg/l, 48 Hours
Ethylbenzene (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1 - 4 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4 mg/l, 96 hours
n-Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	4924 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha)	6.86 - 8.48 mg/l, 96 hours
Xylene (o, m, p isomers) (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8 mg/l, 96 Hours

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**

Benzene (CAS 71-43-2)	2.13
Cumene (CAS 98-82-8)	3.66
Cyclohexane (CAS 110-82-7)	3.44
Ethanol (CAS 64-17-5)	-0.31
Ethylbenzene (CAS 100-41-4)	3.15
Hexane (Other Isomers) (CAS 96-14-0)	3.6
Octane (All isomers) (CAS 111-65-9)	5.18
Pentane (CAS 109-66-0)	3.39
Toluene (CAS 108-88-3)	2.73
Xylene (o, m, p isomers) (CAS 1330-20-7)	3.2
n-Heptane (CAS 142-82-5)	4.66
n-Hexane (CAS 110-54-3)	3.9

**Mobility in soil** Not available.

**Other adverse effects** Not available.

### 13. Disposal considerations

**Disposal instructions** Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

**Hazardous waste code** D001: Waste Flammable material with a flash point <140 °F  
D018: Waste Benzene

#### US RCRA Hazardous Waste U List: Reference

Benzene (CAS 71-43-2)	U019
Cumene (CAS 98-82-8)	U055
Cyclohexane (CAS 110-82-7)	U056
Toluene (CAS 108-88-3)	U220
Xylene (o, m, p isomers) (CAS 1330-20-7)	U239

**Waste from residues / unused products** Dispose of in accordance with local regulations.

**Contaminated packaging** Offer rinsed packaging material to local recycling facilities.

## 14. Transport information

### DOT

<b>UN number</b>	UN1203
<b>UN proper shipping name</b>	Gasoline
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	139, B33, B101, T8
<b>Packaging exceptions</b>	150
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

### IATA

<b>UN number</b>	UN1203
<b>UN proper shipping name</b>	Gasoline
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	3H
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IMDG

<b>UN number</b>	UN1203
<b>UN proper shipping name</b>	Gasoline
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-E, S-E
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable. However, this product is a liquid and if transported in bulk covered under MARPOL 73/78, Annex I.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2)	Cancer
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Central nervous system  
Blood  
Aspiration  
Skin  
Eye  
Respiratory tract irritation  
Flammability

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Benzene (CAS 71-43-2)	LISTED
Cumene (CAS 98-82-8)	LISTED
Cyclohexane (CAS 110-82-7)	LISTED
Ethanol (CAS 64-17-5)	LISTED
Ethylbenzene (CAS 100-41-4)	LISTED
Gasoline (CAS 86290-81-5)	LISTED
Hexane (Other Isomers) (CAS 96-14-0)	LISTED
n-Heptane (CAS 142-82-5)	LISTED
n-Hexane (CAS 110-54-3)	LISTED
Octane (All isomers) (CAS 111-65-9)	LISTED
Pentane (CAS 109-66-0)	LISTED
Toluene (CAS 108-88-3)	LISTED
Xylene (o, m, p isomers) (CAS 1330-20-7)	LISTED

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - No
	Delayed Hazard - No
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Toluene	108-88-3	0-30
Xylene (o, m, p isomers)	1330-20-7	0-25
1,2,4, Trimethylbenzene	95-63-6	0-6
Cumene	98-82-8	0-5
Ethylbenzene	100-41-4	0-5
Benzene	71-43-2	0-4.9
n-Hexane	110-54-3	0-3
Cyclohexane	110-82-7	0-3

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Benzene (CAS 71-43-2)  
Cumene (CAS 98-82-8)  
Ethylbenzene (CAS 100-41-4)  
n-Hexane (CAS 110-54-3)  
Toluene (CAS 108-88-3)  
Xylene (o, m, p isomers) (CAS 1330-20-7)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Pentane (CAS 109-66-0)

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Toluene (CAS 108-88-3) 6594

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Toluene (CAS 108-88-3) 35 % weight/volumn

**DEA Exempt Chemical Mixtures Code Number**

Toluene (CAS 108-88-3) 594

**US. Massachusetts RTK - Substance List**

1,2,4, Trimethylbenzene (CAS 95-63-6)  
Benzene (CAS 71-43-2)  
Cumene (CAS 98-82-8)  
Cyclohexane (CAS 110-82-7)  
Ethanol (CAS 64-17-5)  
Ethylbenzene (CAS 100-41-4)  
Hexane (Other Isomers) (CAS 96-14-0)  
n-Heptane (CAS 142-82-5)  
n-Hexane (CAS 110-54-3)  
Octane (All isomers) (CAS 111-65-9)  
Pentane (CAS 109-66-0)  
Toluene (CAS 108-88-3)  
Xylene (o, m, p isomers) (CAS 1330-20-7)

**US. New Jersey Worker and Community Right-to-Know Act**

1,2,4, Trimethylbenzene (CAS 95-63-6)  
Benzene (CAS 71-43-2)  
Cumene (CAS 98-82-8)  
Cyclohexane (CAS 110-82-7)  
Ethanol (CAS 64-17-5)  
Ethylbenzene (CAS 100-41-4)  
n-Heptane (CAS 142-82-5)  
n-Hexane (CAS 110-54-3)  
Octane (All isomers) (CAS 111-65-9)  
Pentane (CAS 109-66-0)  
Toluene (CAS 108-88-3)  
Xylene (o, m, p isomers) (CAS 1330-20-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

1,2,4, Trimethylbenzene (CAS 95-63-6)  
Benzene (CAS 71-43-2)  
Cumene (CAS 98-82-8)  
Cyclohexane (CAS 110-82-7)  
Ethanol (CAS 64-17-5)  
Ethylbenzene (CAS 100-41-4)  
Gasoline (CAS 86290-81-5)  
Hexane (Other Isomers) (CAS 96-14-0)  
n-Heptane (CAS 142-82-5)  
n-Hexane (CAS 110-54-3)  
Octane (All isomers) (CAS 111-65-9)  
Pentane (CAS 109-66-0)  
Toluene (CAS 108-88-3)  
Xylene (o, m, p isomers) (CAS 1330-20-7)

**US. Rhode Island RTK**

1,2,4, Trimethylbenzene (CAS 95-63-6)  
Benzene (CAS 71-43-2)  
Cumene (CAS 98-82-8)  
Cyclohexane (CAS 110-82-7)  
Ethylbenzene (CAS 100-41-4)  
n-Hexane (CAS 110-54-3)  
Pentane (CAS 109-66-0)  
Toluene (CAS 108-88-3)  
Xylene (o, m, p isomers) (CAS 1330-20-7)

**US. California Proposition 65****US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Benzene (CAS 71-43-2)  
Cumene (CAS 98-82-8)  
Ethylbenzene (CAS 100-41-4)  
Toluene (CAS 108-88-3)

## International Inventories

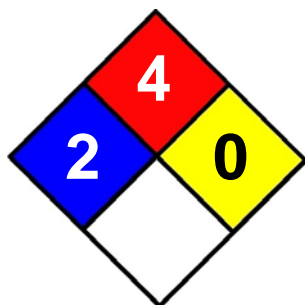
Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

Issue date	13-May-2013
Revision date	23-May-2014
Version #	03
Further information	HMIS® is a registered trade and service mark of the NPCA.
NFPA Ratings	



References	ACGIH EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents HSDB® - Hazardous Substances Data Bank IARC Monographs. Overall Evaluation of Carcinogenicity National Toxicology Program (NTP) Report on Carcinogens ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
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Disclaimer	This material Safety Data Sheet (SDS) was prepared in accordance with 29 CFR 1910.1200 by Valero Marketing & Supply Co., ("VALERO"). VALERO does not assume any liability arising out of product use by others. The information, recommendations, and suggestions presented in this SDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use, the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.
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# SAFETY DATA SHEET

## Kerosene

### 1. IDENTIFICATION

Product Identifier Kerosene

Synonyms: Kero, Kerosine Motor Fuel, Ultra Low Sulfur Kero, ULSK , Dyed Kerosene Dye, K1, K2, Fuel Oil No 1, JP-4, JP-5, JP-8 Jet Fuels, Coal-oil, Range-oil, Pesticide Code 063501, SRK Solvent, Low Aromatic Feedstock, Artic Grade Oil (DFA)

Intended use of the product: Fuel

Contact: Global Companies LLC  
Water Mill Center  
800 South St.  
Waltham, MA 02454-9161  
[www.globalp.com](http://www.globalp.com)

Contact Information: EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300  
COMPANY CONTACT (business hours): 800-542-0778

### 2. HAZARD IDENTIFICATION

According to OSHA 29 CFR 1910.1200 HCS

#### Classification of the Substance or Mixture

Classification (GHS-US):

Flam. Liquid	Category 3	H226
Skin Corrosion/Irritation	Category 2	H315
Aspiration Hazard	Category 1	H304
STOT SE	Category 3	H336
Aquatic Chronic	Category 2	H411

#### Labeling Elements



Signal Word (GHS-US):

Hazard Statements (GHS-US)

#### **Danger**

H226 – Flammable liquid and vapor.  
H315 – Causes Skin irritation.  
H304 – May be fatal if swallowed and enters airways.  
H336 – May cause drowsiness or dizziness.  
H411 – Toxic to aquatic life with long lasting effects.

Precautionary Statements (GHS-US):

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 - Keep container tightly closed.  
P240 – Ground/bond container and receiving equipment.  
P241 – Use explosion-proof electrical/ventilating/lighting equipment pursuant to applicable electrical code.  
P242 – Use only non-sparking tools.  
P243 – Take precautionary measures against static discharge.  
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 – Wash skin thoroughly after handling.

P271 – Use only outdoors or in a well-ventilated area.  
P273 – Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P303+361+353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse with water/shower.  
P308+311 - If exposed or concerned: Get medical advice/attention.  
P301+310 - If swallowed: Immediately call a poison center/doctor/...  
P331 - Do NOT induce vomiting.  
P370+P378 – In case of fire use firefighting foam or other appropriate media for Class B fires to extinguish.  
P403+235 - Store in a well-ventilated place. Keep cool.  
P405 - Store locked up.  
P501 – Dispose of contents/container in accordance with local/regional/national/international regulation.

### Other information:

NFPA 704  
Health: 2  
Fire: 2  
Reactivity: 0



## 3. COMPOSITION / INFORMATION ON INGREDIENTS

### Chemical Composition Information

Mixture

Name	Product Identifier (CAS#)	% (w/w)	Classification
Kerosene	8008-20-6	100	Flam Gas 3, H226; Skin Irrit. 2, H315; Aspiration 1, H304; STOT SE 3, H336; Aquatic Chronic H411
Naphthalene	91-20-3	0.04	Carc. 2, H351; Acute Tox. 4, H302; Aquatic Acute 1, H400; Aquatic Chronic 1, H410

### Additional Formulation Information

A complex combination of hydrocarbons including naphthenes, paraffins, and aromatics.

## 4. FIRST AID MEASURES

### Response

Route	Measures
Inhalation	Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.
Ingestion	Aspiration Hazard: DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.
Eye Contact	In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention. In case of contact lenses, remove immediately.



Route	Measures
Skin Contact	Remove contaminated clothing and shoes. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and of the area of the body burned.

#### Most Important Symptoms

Contact with eyes and face may cause irritation. Long-term exposure may cause dermatitis (itching, irritation, pain and swelling). Kerosene has shown to augment the toxicity of skin sensitizing agents.

Inhalation may cause irritation and significant or long term exposure could cause respiratory insufficiency and pulmonary edema.

#### Immediate Medical Attention and Special Treatment

For contact with skin or eyes, immediately wash or flush contaminated eyes with gently flowing water. If possible, irrigate each eye continuously with 0.9% saline (NS). If ingested, rinse mouth and administer 5 m/kg up to 200 ml of water of dilution if the patient can swallow. Do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

If inhaled, administer oxygen or establish a patent airway if breathing is labored. Suction if necessary. Monitor closely, anticipate seizures. Consider orotracheal or nostracheal intubation of airway control if patient is unconscious or is in severe respiratory distress.

Discard any clothing or shoes contaminated as they may be flammable.

## 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

Foam, carbon dioxide, dry chemical are most suitable

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO<sub>2</sub>, water spray, firefighting foam, or Halon. Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other firefighting equipment.

LARGE FIRES: Foam, carbon dioxide, dry chemical. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

During certain times of the year and/or in certain geographical locations, fuel oil may contain additional additives. Firefighting foam suitable for polar solvents is recommended for fuel with greater than 10% oxygenate concentration - refer to NFPA 11 'Low Expansion Foam -1994 Edition.'

#### Specific Hazards / Products of Combustion

Moderate fire hazard when exposed to heat or flame with a very low flash point. Flammable and easily ignited when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Combustion may produce smoke, carbon monoxide and other products of incomplete combustion.

#### Special Precautions and Protective Equipment for Firefighters

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied firefighting foam.

#### Fighting Equipment/Instructions

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH- approved pressure-demand self-contained breathing apparatus with full face piece and protective clothing.

Refer to Section 9 for fire properties of this chemical including flash point, auto ignition temperature, and explosive limits.



## 6. ACCIDENTAL RELEASE MEASURES

### ACTIVATE FACILITY SPCC, SPILL CONTINGENCY or EMERGENCY PLAN.

#### Personal Precautions

Due to high vapor density, flammable / toxic vapors may be present in low lying areas, dikes, pits, drains, or trenches. Vapors may accumulate in low lying areas and reach ignitable concentrations. Ventilate the area. Use of non-sparking tools and intrinsically safe equipment is recommended. Potential for flammable atmosphere should be monitored using a combustible gas indicator positioned downwind of the spill area. Refer to Sections 2 and 7 for further hazard warnings and handling instructions.

Use appropriate personal protective equipment to prevent eye/skin contact and absorption. Use NIOSH approved respiratory protection, if warranted, to prevent exposures above permissible limits. Refer to Section 8. Contaminated clothing should not be near sources of ignition.

#### Emergency Measures

As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Consider wind direction. Secure all ignition sources (flame, spark, hot work, hot metal, etc.) from area. Evaluate the direction of product travel, diking sewers, etc. to confirm spill areas. Do not touch or walk-through spilled material. For large spills, isolate initial action distance downwind 1,000 ft. (300 m).

#### Environmental Precautions

Stop the spill to prevent environmental release if it can be done safely. Product is toxic to aquatic life. Take action to isolate environmental receptors including drains, storm sewers and natural water bodies. Keep on impervious surface if at all possible. Use water sparingly to prevent product from spreading. Foam and absorbents may be used to reduce / prevent airborne release.

Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Follow federal, state or local requirements for reporting environmental release where necessary. Refer to Section 15 for further information.

#### Containment and Clean-Up Methods

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of firefighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with dry earth, sand or other non-combustible, inert oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container with clean, non-sparking tools for reclamation or disposal. Response and cleanup crews must be properly trained and must utilize proper protective equipment. Refer to Section 8 for appropriate protective equipment.

## 7. HANDLING AND STORAGE

### USE ONLY AS A FUEL.

### DO NOT SIPHON BY MOUTH.

#### Handling Precautions

Handle as a combustible liquid. Keep away from heat, sparks, and open flame. No smoking. Electrical equipment should be approved for classified area. Bond and ground containers during product transfer pursuant to NFPA 70 and API RP 2003 to reduce the possibility of static-initiated fire or explosion. Follow precautions to prevent static initiated fire.

Use good personal hygiene practices. Use only with protective equipment specified in Section 8. Avoid repeated and/or prolonged skin exposure. Use only outdoors or in well ventilated areas. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when



## SAFETY DATA SHEET

### Kerosene

higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API RP 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

#### Storage

Large quantities of kerosene are stored in cylindrical floating-roof or fixed-roof tanks at an ambient storage temperature. Separate from incompatible chemicals (Refer to Section 10) by distance or secondary containment. Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers that are clearly labeled. Label all secondary containers that this material is transferred into with the chemical name and associated hazard(s). Empty product containers or vessels may contain flammable vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Storage tanks should have a venting system. If stored in small containers, the area should be well ventilated and protected from potential damage or vehicular traffic. Post "No Smoking" signs in product storage areas. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code" or applicable building code. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks in Flammable and Combustible Liquid Service" and API RP 2015 "Safe Entry and Cleaning of Petroleum Storage Tanks".

#### Incompatibles

Keep away from strong oxidizers, ignition sources and heat.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Occupational Exposure Limits

Component	CAS #	List	Value
Kerosene	8008-20-6	ACGIH TLV-TWA	200 mg/m3*
Naphthalene	91-20-3	ACGIH TLV-TWA OSHA PEL ACGIH STEL	10 ppm 10 ppm 15 ppm

\*Critical effects; Skin & Upper Respiratory Tract irritant; CNS impairment.

#### Engineering Controls

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Intrinsically safe equipment and non-sparking tools shall be used in circumstances where concentrations may exceed lower flammable limits. Grounding and bonding shall be used to prevent accumulation and discharge of static electricity. Emergency shower and eyewash should be provided in proximity to handling areas in the event of exposure to decontaminate.

#### Personal Protective Equipment

Exposure	Equipment
Eye / Face	Wear appropriate chemical protective glasses or goggles or face shields to prevent skin and eye contact especially caused from splashing.
Skin	Wear appropriate personal protective clothing to prevent skin contact. Gloves constructed of nitrile, neoprene or PVC are recommended when handling this material. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure.
Respiratory	<p>A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations.</p> <p>Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.</p>
Thermal	Product is stored at ambient temperature. No thermal protection is required except for emergency operations involving actual or potential for fire. Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.





## 9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Pale yellow to water-white. May be dyed red.
Odor	Strong characteristic petroleum distillate odor.
Odor Threshold	1 ppm
pH	Not available
Melting Point	-4 °F (-20 °C)
Boiling Point Range	300 to 580 °F (149 to 304 °C)
Flash Point	100.4 – 125.6 °F (38 -52 °C)
Evaporation Rate	Slow, varies with conditions
Flammability	Flammable liquid
Flammable Limits	0.7 % - 5.0%
Vapor Pressure	0.480 mm Hg @ 20 °C
Vapor Density	4.5 (air=1)
Specific Gravity	0.80 to <1.0 (water=1)
Solubility	Insol in water; miscible with other petroleum solvents.
Partition Coefficient (N-octanol/water)	Log Kow range of 3.3 to >.6.0
Autoignition Temperature	410 °F (210 °C)
Decomposition Temperature	When heated it emits acrid smoke and irritating vapors.
Viscosity	1.39 – 1.50 mm <sup>2</sup> /x (40C)
Percent Volatiles	100

## 10. STABILITY AND REACTIVITY

### Stability

This is a stable material that is flammable liquid (OSHA/GHS hazard category 3). Stable during transport.

### Reactivity

Material is not self-reacting. Flammable concentrations may be present in air. Compound can react with oxidizing materials.

### Possibility of Hazardous Reactions

Hazardous polymerization will not occur.

### Incompatibility

Keep away from strong oxidizers such as nitric and sulfuric acids.

### Conditions to Avoid

Avoid high temperatures, open flames, sparks, static electricity, welding, smoking and other ignition sources.

### Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity:

#### Acute Toxicity (Inhalation LC50)

Kerosene (8008-20-6)

LC50 Inhalation Rat >5.28 mg/l/4h



## SAFETY DATA SHEET

### Kerosene

#### Acute Toxicity (Dermal LC50)

Kerosene (8008-20-6)

LD50 Dermal Rabbit >2000 mg/kg

#### Acute Toxicity (Oral LC50)

Kerosene (8008-20-6)

LD50 Dermal Rabbit >5000 mg/kg

Skin Corrosion/Irritation: Prolonged and repeated contact may cause skin irritation leading to dermatitis. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: OSHA: NO IARC: NO NTP: NO ACGIH: No

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Specific Target Organ Toxicity (Single Exposure): Inhalation exposure may cause drowsiness or dizziness by inhalation exposure.

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

Potential Health Effects: Vapor irritating to skin, eyes, nose, and throat. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

WARNING: The burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

## 12. ECOLOGICAL INFORMATION

#### **Toxicity:**

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

Data for Component: Kerosene (8008-20-6)

Material is toxic to aquatic organisms based on an acute basis (LC50/EC50 >1 but ≤ 10 mg/L in the most sensitive species tested).

Material is a long-term aquatic hazard based on a chronic basis (LC50/EC50 >1 but ≤ 10 mg/L in the most sensitive species tested).

Persistence and Degradation: This material is not expected to be readily biodegradable.

Bioaccumulative Potential: Not available

Mobility In Soil: Not available

Other Adverse Effects: None known

Other Information: Avoid release to the environment.



### 13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options. May be considered a hazardous waste if disposed. Direct solid waste (landfill) or incineration at a solid waste facility is not permissible. Do not discharge to sanitary or storm sewer. Personnel handling waste containers should follow precautions provided in this document.

Shipping containers must be DOT authorized packages. Follow licensure and regulations for transport of hazardous material and hazardous waste as applicable.

### 14. TRANSPORT INFORMATION

#### US DOT

UN Identification Number	UN 1223
Proper Shipping Name	Kerosene
Hazard Class and Packing Group	3, PGIII
Shipping Label	Flammable liquid
Placard / Bulk Package	Flammable liquid, 1223
Emergency Response Guidebook Guide Number	128

#### IATA Information

UN Identification Number	UN 1223
Proper Shipping Name	Kerosene
Hazard Class and Packing Group	3, PGIII
ICAO Label	3
Packing Instructions Cargo	366, Y344
Max Quantity Per Package Cargo	220L
Packing Instructions Passenger	366, Y355
Max Quantity per Package	60L

#### ICAO

UN Identification Number	UN 1223
Shipping Name / Description	Kerosene
Hazard Class and Packing Group	3, PG III
IMDG Label	3

#### IMDG

UN Identification Number	UN1223
Shipping Name / Description	Kerosene
Hazard Class and Packing Group	3, PGIII
IMDG Label	3
EmS Number	F-E-S-E
Marine Pollutant	Yes

### 15. REGULATORY INFORMATION

#### U.S. Federal, State, and Local Regulatory Information

Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

#### OSHA Hazard Communication Standard

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

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

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	Yes
Reactive Hazard	No
Sudden Release of Pressure Hazard	No



## SAFETY DATA SHEET

### Kerosene

#### Clean Water Act (Oil Spills)

Any spill or release of this product to "navigable waters" (Essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

#### CERCLA Section 103 and SARA Section 304 (Release to the Environment)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts this material. This product does not contain any chemicals subject to the reporting requirements of CERCLA Section 103 or SARA 304.

#### SARA Section 313- Supplier Notification

This product does not contain any chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

#### Pennsylvania Right to Know Hazardous Substance list:

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

Component	CAS	Amount
Kerosene	8008-20-6	100%

#### New Jersey Right to Know Hazardous Substance list:

The following product components are cited in the New Jersey Right to Know Hazardous Substance List, and are present at levels which require reporting.

Component	CAS	Amount
Kerosene	8008-20-6	100%

#### California Proposition 65

WARNING: This product contains chemicals known to the State of California to cause Cancer or Reproductive Toxicity.

Component	CAS	Amount
Naphthalene	91-20-3	0.04%

#### U.S. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

#### CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

#### Canadian Regulatory Information (WHMIS)

Class B3 – Combustible Liquid

Class D2B – Materials causing other toxic effects. Toxic material.

## 16. OTHER INFORMATION

Version	3
Issue Date	May 20, 2016
Prior Issue Date	February 10, 2015

#### Description of Revisions

Revised to meet Globally Harmonized System for chemical hazard communication requirements pursuant to OSHA regulatory revisions 77 FR 17884, March 26, 2012.



## SAFETY DATA SHEET

### Kerosene

#### Abbreviations

°F	Degrees Fahrenheit (temperature)	mL	Milliliter
<	Less than	mm <sup>2</sup>	Square millimeters
=	Equal to	mmHg	Millimeters of mercury (pressure)
>	Greater than	N/A	Not applicable
AP	Approximately	N/D	Not determined
C	Centigrade (temperature)	ppm	Parts per million
kg	Kilogram	sec	Second
L	Liter	ug	Micrograms
mg	Milligrams		

#### Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
AIHA	American Industrial Hygiene Association	OPA	Oil Pollution Act of 1990
AL	Action Level	OSHA	U.S. Occupational Safety & Health Administration
ANSI	American National Standards Institute	PEL	Permissible Exposure Limit (OSHA)
API	American Petroleum Institute	RCRA	Resource Conservation and Recovery Act Reauthorization Act of 1986 Title III
CAS	Chemical Abstract Service	REL	Recommended Exposure Limit (NIOSH)
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act	RVP	Reid Vapor Pressure
DOT	U.S. Department of Transportation	SARA	Superfund Amendments and
EC50	Ecological concentration 50%	SCBA	Self Contained Breathing Apparatus
EPA	U.S. Environmental Protection Agency	SPCC	Spill Prevention, Control, and Countermeasures
ERPG	Emergency Response Planning Guideline	STEL	Short Term Exposure Limit (generally 15 minutes)
GHS	Global Harmonized System	TLV	Threshold Limit Value (ACGIH)
HMIS	Hazardous Materials Information System	TSCA	Toxic Substances Control Act
IARC	International Agency for Research On Cancer	TWA	Time Weighted Average (8 hr.)
IATA	International Air Transport Association	UN	United Nations
IMDG	International Maritime Dangerous Goods	UNECE	United Nations Economic Commission for Europe
Koc	Soil Organic Carbon	WEEL	Workplace Environmental Exposure Level (AIHA)
LC50	Lethal concentration 50%	WHMIS	Canadian Workplace Hazardous Materials Information System
LD50	Lethal dose 50%		
MSHA	Mine Safety and Health Administration		
NFPA	National Fire Protection Association		
NIOSH	National Institute of Occupational Safety and Health		
NOIC	Notice of Intended Change		

#### Disclaimer of Expressed and Implied Warranties

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

**\*\* End of Safety Data Sheet \*\***

# SAFETY DATA SHEET

## Propane

### Section 1. Identification

<b>GHS product identifier</b>	: Propane
<b>Chemical name</b>	: propane
<b>Other means of identification</b>	: Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
<b>Product type</b>	: Liquefied gas
<b>Product use</b>	: Synthetic/Analytical chemistry.
<b>Synonym</b>	: Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
<b>SDS #</b>	: 001045
<b>Supplier's details</b>	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
<b>24-hour telephone</b>	: 1-866-734-3438

### Section 2. Hazards identification

<b>OSHA/HCS status</b>	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	: FLAMMABLE GASES - Category 1 GASES UNDER PRESSURE - Liquefied gas

#### GHS label elements

##### **Hazard pictograms**



**Signal word** : Danger

**Hazard statements** : Extremely flammable gas.  
Contains gas under pressure; may explode if heated.  
May cause frostbite.  
May displace oxygen and cause rapid suffocation.  
May form explosive mixtures with air.

#### Precautionary statements

##### **General**

: Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.

##### **Prevention**

: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

##### **Response**

: Leaking gas fire: Do not extinguish, unless leak can be stopped safely. In case of leakage, eliminate all ignition sources.

##### **Storage**

: Protect from sunlight. Store in a well-ventilated place.

## Section 2. Hazards identification

- Disposal** : Not applicable.
- Hazards not otherwise classified** : Liquid can cause burns similar to frostbite.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Substance
- Chemical name** : propane
- Other means of identification** : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.
- Product code** : 001045

### CAS number/other identifiers

- CAS number** : 74-98-6

Ingredient name	%	CAS number
Propane	100	74-98-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

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 if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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 adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. In case of contact with liquid, warm frozen tissues slowly with lukewarm water and get medical attention. Do not rub affected area. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe. Ingestion of liquid can cause burns similar to frostbite. If frostbite occurs, get medical attention. 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. As this product rapidly becomes a gas when released, refer to the inhalation section.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Liquid can cause burns similar to frostbite.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.

## Section 4. First aid measures

- Frostbite** : Try to warm up the frozen tissues and seek medical attention.
- Ingestion** : Ingestion of liquid can cause burns similar to frostbite.

### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:, frostbite
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:, frostbite
- Ingestion** : Adverse symptoms may include the following:, frostbite

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. 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.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

- 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. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

- 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. For incidents involving large quantities, thermally insulated undergarments and thick textile or leather gloves should be worn.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.



## Section 6. Accidental release measures

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. 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** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

**Large spill** : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. 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). Contains gas under pressure. Do not get in eyes or on skin or clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment.

**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 in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F). Keep container tightly closed and sealed until ready for use. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Propane	<b>NIOSH REL (United States, 10/2016).</b> TWA: 1800 mg/m <sup>3</sup> 10 hours. TWA: 1000 ppm 10 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 1800 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1800 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours. <b>ACGIH TLV (United States, 3/2019). Oxygen Depletion [Asphyxiant]. Explosive potential.</b>

## Section 8. Exposure controls/personal protection

<b>Appropriate engineering controls</b>	: 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.
<b>Environmental exposure controls</b>	: 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.
<b>Individual protection measures</b>	
<b>Hygiene measures</b>	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
<b>Eye/face protection</b>	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
<b>Skin protection</b>	
<b>Hand protection</b>	: 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. If contact with the liquid is possible, insulated gloves suitable for low temperatures should be worn. 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.
<b>Body protection</b>	: 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.
<b>Other skin protection</b>	: 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.
<b>Respiratory protection</b>	: 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.
<b>Thermal hazards</b>	: If there is a risk of contact with the liquid, all protective equipment worn should be suitable for use with extremely low temperature materials.

## Section 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	: Gas.
<b>Color</b>	: Colorless.
<b>Odor</b>	: Odorless.BUT MAY HAVE SKUNK ODOR ADDED.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point</b>	: -187.6°C (-305.7°F)
<b>Boiling point</b>	: -42.1°C (-43.8°F)

## Section 9. Physical and chemical properties

<b>Critical temperature</b>	: 96.55°C (205.8°F)
<b>Flash point</b>	: Closed cup: -104°C (-155.2°F) Open cup: -104°C (-155.2°F)
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials.
<b>Lower and upper explosive (flammable) limits</b>	: Lower: 1.8% Upper: 8.4%
<b>Vapor pressure</b>	: 109 (psig)
<b>Vapor density</b>	: 1.6 (Air = 1)
<b>Specific Volume (ft<sup>3</sup>/lb)</b>	: 8.6206
<b>Gas Density (lb/ft<sup>3</sup>)</b>	: 0.116 (25°C / 77 to °F)
<b>Relative density</b>	: Not applicable.
<b>Solubility</b>	: Not available.
<b>Solubility in water</b>	: 0.0244 g/l
<b>Partition coefficient: n-octanol/water</b>	: 1.09
<b>Auto-ignition temperature</b>	: 287°C (548.6°F)
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not applicable.
<b>Flow time (ISO 2431)</b>	: Not available.
<b>Molecular weight</b>	: 44.11 g/mole
<b><u>Aerosol product</u></b>	
<b>Heat of combustion</b>	: -46012932 J/kg

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow gas to accumulate in low or confined areas.
<b>Incompatible materials</b>	: Oxidizers
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<b>Hazardous polymerization</b>	: Under normal conditions of storage and use, hazardous polymerization will not occur.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Not available.

#### Irritation/Corrosion

Not available.

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Liquid can cause burns similar to frostbite.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
- Ingestion** : Ingestion of liquid can cause burns similar to frostbite.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:, frostbite
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:, frostbite
- Ingestion** : Adverse symptoms may include the following:, frostbite

### 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.

## Section 11. Toxicological information

### Potential chronic health effects

Not available.

<b>General</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

## Section 12. Ecological information

### Toxicity

Not available.

### Persistence and degradability

Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Propane	1.09	-	low

### Mobility in soil






**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. 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	TDG	Mexico	IMDG	IATA
UN number	UN1978	UN1978	UN1978	UN1978	UN1978
UN proper shipping name	PROPANE SEE ALSO PETROLEUM GASES, LIQUEFIED	PROPANE	PROPANE SEE ALSO PETROLEUM GASES, LIQUEFIED (propane)	PROPANE	PROPANE
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

“Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product.”

### Additional information

#### DOT Classification

: **Limited quantity**  
Yes.

#### Packaging instruction

##### Passenger aircraft

Quantity limitation: Forbidden.

##### Cargo aircraft

Quantity limitation: 150 kg

#### Special provisions

19, T50

For domestic transportation only, UN1075 may be substituted for the UN number shown as long as the substitution is consistent on package markings, shipping papers, and emergency response information. See 49 CFR 172.102 Special Provision 19.

Containers of NON-ODORIZED liquefied petroleum gas must be marked either NON-ODORIZED or NOT ODORIZED as of September 30, 2006. [49 CFR 172.301(f), 326(d), 330(c) and 338(e)]

#### TDG Classification

: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).

**Explosive Limit and Limited Quantity Index** 0.125

**ERAP Index** 3000

**Passenger Carrying Vessel Index** 65

**Passenger Carrying Road or Rail Index** Forbidden

**Special provisions** 29, 42

#### IATA

: **Quantity limitation** Passenger and Cargo Aircraft: Forbidden. Cargo Aircraft Only: 150 kg.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 14. Transport information

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : TSCA 8(a) CDR Exempt/Partial exemption: Not determined  
Clean Air Act (CAA) 112 regulated flammable substances: propane

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

**SARA 302/304**

### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : Refer to Section 2: Hazards Identification of this SDS for classification of substance.

### State regulations

**Massachusetts** : This material is listed.

**New York** : This material is not listed.

**New Jersey** : This material is listed.

**Pennsylvania** : This material is listed.

### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia** : This material is listed or exempted.

**Canada** : This material is listed or exempted.

**China** : This material is listed or exempted.

**Europe** : This material is listed or exempted.

## Section 15. Regulatory information

<b>Japan</b>	: <b>Japan inventory (ENCS):</b> This material is listed or exempted. <b>Japan inventory (ISHL):</b> This material is listed or exempted.
<b>New Zealand</b>	: This material is listed or exempted.
<b>Philippines</b>	: This material is listed or exempted.
<b>Republic of Korea</b>	: This material is listed or exempted.
<b>Taiwan</b>	: This material is listed or exempted.
<b>Thailand</b>	: Not determined.
<b>Turkey</b>	: This material is listed or exempted.
<b>United States</b>	: This material is active or exempted.
<b>Viet Nam</b>	: This material is listed or exempted.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

<b>Health</b>	/	2
<b>Flammability</b>		4
<b>Physical hazards</b>		0

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.

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.

### National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE GASES - Category 1	Expert judgment
GASES UNDER PRESSURE - Liquefied gas	Expert judgment

### History

<b>Date of printing</b>	: 11/15/2020
<b>Date of issue/Date of revision</b>	: 11/15/2020
<b>Date of previous issue</b>	: 10/5/2020
<b>Version</b>	: 1.02



## Section 16. Other information

### Key to abbreviations

- : ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

### References

- : Not available.

### Other special considerations

- : The information below is given to call attention to the issue of "Naturally occurring radioactive materials". Although Radon-222 levels in the product represented by this MSDS do not present any direct Radon exposure hazard, customers should be aware of the potential for Radon daughter build up within their processing systems, whatever the source of their product streams. Radon-222 is a naturally occurring radioactive gas which can be a contaminant in natural gas. During subsequent processing, Radon tends to be concentrated in Liquefied Petroleum Gas streams and in product streams having a similar boiling point range. Industry experience has shown that this product may contain small amounts of Radon-222 and its radioactive decay products, called Radon "daughters". The actual concentration of Radon-222 and radioactive daughters in the delivered product is dependent on the geographical source of the natural gas and storage time prior to delivery. Process equipment (i.e. lines, filters, pumps and reaction units) may accumulate significant levels of radioactive daughters and show a gamma radiation reading during operation. A potential external radiation hazard exists at or near any pipe valve or vessel containing a Radon enriched stream, or containing internal deposits of radioactive material due to the transmission of gamma radiation through its wall. Field studies reported in the literature have not shown any conditions that subject workers to cumulative exposures in excess of general population limits. Equipment emitting gamma radiation should be presumed to be internally contaminated with alpha emitting decay products which may be a hazard if inhaled or ingested. Protective equipment such as coveralls, gloves, and respirator (NIOSH/MHSA approved for high efficiency particulates and radionuclides, or supplied air) should be worn by personnel entering a vessel or working on contaminated process equipment to prevent skin contamination, ingestion, or inhalation of any residues containing alpha radiation. Airborne contamination may be minimized by handling scale and/or contaminated materials in a wet state.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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

### 1.1. Product identifier

Product name: WD-40® Multi-Use Product - Aerosol

Container size: 100 ml, 125 ml, 150ml, 200 ml, 240 ml, 250 ml, 300 ml, 400 ml, 420 ml

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

Application: Universal lubricant.

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

Manufacturer: WD-40  
Brick Close | Kiln Farm  
MK11 3LJ Milton Keynes  
United Kingdom

Supplier/Distributor: Hashahal, Inc.  
HaRav Shalom Jarufi St 4  
Rishon LeTsiyon  
Tel:03-7612700

### 1.4. Emergency telephone number

Emergency telephone: Israel Poison Information Center: 04-7771900 (24/7)

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## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

The product is classified:

SI 2302 (1): Flam. Aerosol 1 - STOT SE 3;H336 - Asp. Tox. 1

### 2.2. Label elements



Danger

<u>Contains:</u>	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H336	May cause drowsiness or dizziness.
P102	Keep out of reach of children.
P271	Use only outdoors or in a well-ventilated area.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251	Do not pierce or burn, even after use.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C.
P211	Do not spray on an open flame or other ignition source.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331	Do NOT induce vomiting.

Repeated exposure may cause skin dryness or cracking.

### 2.3. Other hazards

PBT/vPvB: This product does not contain any PBT or vPvB substances.

Other: Aerosol containers can burst violently when heated, due to excess pressure build-up. The product contains volatile, organic compounds which have a photochemical ozone creation potential. The product contains organic solvents. Organic solvents may be absorbed into the body by inhalation and cause permanent damage to the nervous system, including the brain.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2. Mixtures

The product contains: organic solvents, propellants and mineral oil.

SI 2302 (1):

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
60-80	-	919-857-5	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics	Flam. Liq. 3;H226 STOT SE 3;H336 Asp. Tox. 1;H304	

Reference: The full text for all hazard statements is displayed in section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

**Burns:** Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

**Inhalation:** Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring along these instructions.

**Skin contact:** Remove contaminated clothes and rinse skin thoroughly with water. In case of eczema or other skin disorders: Seek medical attention and bring these instructions.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.

**Ingestion:** Aspiration hazard. Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Immediate transport to hospital. Bring along these instructions.

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

**Symptoms/effects:** Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure.

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

**Medical attention/treatments:** Treat symptomatically. If there is any suspicion of aspiration into the lungs either directly or as a result of vomiting, obtain medical advice.

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## SECTION 5: FIREFIGHTING MEASURES

### **5.1. Extinguishing media**

Extinguishing media: Extinguish with carbon dioxide or dry powder. Cool containers exposed to heat with water spray and remove container, if no risk is involved.  
Do not use water jet as an extinguisher, as this will spread the fire.

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

Specific hazards: Aerosol containers can explode when heated, due to excessive pressure build-up. During fire, gases hazardous to health may be formed.

### **5.3. Advice for firefighters**

Protective equipment for fire-fighters: Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Personal precautions: Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Do not smoke or use open fire, or other sources of ignition.

### **6.2. Environmental precautions**

Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

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

Methods for cleaning up: Absorb spillage with non-combustible, absorbing material. Clean contaminated area with oil-removing material.

### **6.4. Reference to other sections**

Reference: For personal protection, see section 8. For waste disposal, see section 13.

## SECTION 7: HANDLING AND STORAGE

### **7.1. Precautions for safe handling**

Safe handling advice: Observe good chemical hygiene practices.  
Work practice should minimise contact. Avoid inhalation of vapours and spray mists. Avoid contact with skin and eyes.

Technical measures: Do not smoke or use open fire or other sources of ignition.

Technical precautions: Provide adequate ventilation. Provide easy access to water supply or an emergency shower.

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

Technical measures for safe storage: Follow the rules for storage of flammable products.

Storage conditions: Store in a cool and well-ventilated place. Do not store near heat sources or expose to high temperatures.

Specific use(s): No information available.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Occupational exposure limits:

<u>CAS-No.:</u>	<u>Chemical name:</u>	<u>As:</u>	<u>Exposure limits:</u>	<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
124-38-9	Carbon dioxide	-	5000 ppm	TWA	-	ACGIH
		-	3000 ppm 0	STEL	15min	

### 8.2. Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.

Personal protection: Personal protection equipment should be chosen according to the ANSI standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment.

Hand protection: Risk of contact: Wear protective gloves. It is recommended to use gloves of Viton or nitrile rubber. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Other types of gloves can be recommended by the glove supplier.

Eye protection: Risk of splashes: Wear goggles/face shield.

Hygiene measures: Wash hands after handling. Do not eat, drink or smoke when using the product. Change contaminated clothing. Wash contaminated clothing before reuse.

Environmental Exposure Controls: Not available.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Appearance: Aerosol.  
Colour: Light brown.  
Odour: Characteristic.  
pH: Not available.  
Melting point / freezing point: < - 66°C (ASTM D 97)  
Boiling point: 176°C (liquid phase)  
Flash point: 47°C (liquid phase)  
Explosion limits: 0.6-8.2% vol. (Main components)  
Vapour pressure: 7.2 bar (20°C)  
9.4 bar (50°C)  
Vapour density: Not available.  
Relative density: 0.817 g/ml  
Solubility: Insoluble in water.  
Partition coefficient  
(n-octanol/water): Not available.  
Decomposition  
temperature (°C): Not available.  
Viscosity: Kinematic viscosity: 2-3 mm<sup>2</sup>/s (40 °C)

### 9.2. Other information

Other data: Not available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Reactivity: Not reactive.

### 10.2. Chemical stability

Stability: Stable under normal temperature conditions.

### 10.3. Possibility of hazardous reactions

Hazardous reactions: None known.

### 10.4. Conditions to avoid

Conditions to avoid: Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight.

### 10.5. Incompatible materials

Incompatible materials: Strong oxides.

### 10.6. Hazardous decomposition products

Hazardous decomposition  
products: None in particular.

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## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

Low order of acute toxicity, but aspiration following ingestion and vomiting may cause severe and potentially fatal chemical pneumonitis.

Acute Toxicity (Oral): Based on available data, the classification criteria are not met.

Acute Toxicity (Dermal): Based on available data, the classification criteria are not met.

Acute Toxicity (Inhalation): Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive Toxicity: Based on available data, the classification criteria are not met.

STOT - Single exposure: May cause drowsiness or dizziness.

STOT - Repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: May be fatal if swallowed and enters airways.

Inhalation: In high concentrations, vapours and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.

Skin contact: Prolonged contact may cause redness, irritation and dry skin.

Eye contact: May irritate and cause redness and pain.

Ingestion: Low order of acute toxicity, but aspiration following ingestion and vomiting may cause severe and potentially fatal chemical pneumonitis.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Ecotoxicity: Not classified as dangerous to the environment. Oil spills are generally hazardous to the environment.

### 12.2. Persistence and degradability

Degradability: The degradability of the product has not been stated.

### 12.3. Bioaccumulative potential

Bioaccumulative potential: No data available on bioaccumulation.

### 12.4. Mobility in soil

Mobility: No data available.

### 12.5. Results of PBT and vPvB assessment

PBT/vPvB: This product does not contain any PBT or vPvB substances.

### 12.6. Other adverse effects

Other adverse effects: An oil film may cause physical damage to organisms and disturb the transportation of oxygen in the intermediate zone between air/water or water/air.

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## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Do not puncture or incinerate even when empty.

Contaminated packaging: Empty aerosol containers before disposal.

## SECTION 14: TRANSPORT INFORMATION

The product is covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1. UN number

UN-No: 1950

### 14.2. UN proper shipping name

Proper Shipping Name: AEROSOLS, flammable

### 14.3. Transport hazard class(es)

Class: 2

### 14.4. Packing group

PG: -

### 14.5. Environmental hazards

Marine pollutant: No.

Environmentally Hazardous No.

Substance:

### 14.6. Special precautions for user

Special precautions: None known.

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk: This product is not intended for transport in bulk.

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulation: SI 2302 part 1 - Dangerous substances and mixtures: Classification, labelling, marking and packaging, with amendments.  
Work Safety Regulations (Safety Data Sheets, Classification, Packing, Labeling and Marking of Packages), 5758-1998, with amendments.  
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.  
Threshold Limit Values (2018), ACGIH, by the American Conference on Governmental Industrial Hygienists.

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## SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

Abbreviations and acronyms used in the safety data sheet:

- Flam. Liq. = Flammable liquid.
- Asp. Tox. = Aspiration toxicity.
- PBT = Persistent, Bioaccumulative and Toxic.
- STOT SE = Specific target organ toxicity, single exposure.
- vPvB = very Persistent and very Bioaccumulative.

Additional information:

Classification according to Regulation (EC) No. 1272/2008:  
Health Hazards: Calculation method.  
Physical Hazards: Expert judgement.

Wording of H-statements:

H222	Extremely flammable aerosol.
H226	Flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.

---

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.

Made by DHI - Environment and Toxicology, Artens Allé 5, DK-2970 Hørsholm, Denmark.  
[www.dhigroup.com](http://www.dhigroup.com).



# SAFETY DATA SHEET

DATE: 1.2.21 Rev 10

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Permanent Marking Chalk Blue

**USE OF PRODUCT:** Chalk Box Marking Chalk

**MANUFACTURER:** Keson LLC

**ADDRESS:** 810 Commerce St., Aurora, IL 60504

**EMERGENCY PHONE:** 1-800-345-3766 (8am to 5pm Central Time, Monday – Friday)

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## SECTION 2: HAZARDS IDENTIFICATION

**OSHA GHS Hazard Statements (Warning Label)**

**DANGER:** May cause cancer (lung)

### EMERGENCY OVERVIEW:

**Product Description:** These products are colored, finely powdered, odorless chalks. Health Hazards: Inhalation of dusts from this product may irritate the respiratory system. Skin and eye contact may cause mechanical abrasion. These chalks contain Crystalline Silica, a known human carcinogen by inhalation.

**Flammability Hazards:** These chalks are not flammable. Finely divided dusts from these products can form explosive mixtures in air. If involved in a fire, these products may decompose to form iron oxides, aluminum oxides, silicon dioxide, sulfur dioxide, magnesium oxides, carbon oxides and calcium oxides.

### POTENTIAL HEALTH EFFECTS

**EYES:** May cause irritation. Chalk dust is discomforting and abrasive to the eyes.

**SKIN:** Prolonged contact may cause irritation. When the product is used as intended, it is unlikely to cause problems.

**INGESTION:** Ingestion of large amount may cause internal irritation. Ingestion is considered an unlikely route of entry in commercial or industrial environments.

**INHALATION:** May irritate the respiratory system. When the product is used as intended, it is unlikely to cause problems.

**Chronic:** Repeated or prolonged inhalation exposure to crystalline silica dust beyond exposure limits may cause chronic lung injury (silicosis). Prolonged inhalation of iron oxide dust is known to produce a benign lung condition known as siderosis. When the product is used as intended, dust levels should not exceed exposure limits. See Sections 8 and 11.



**DANGER**

### Hazard Ratings:

**Hazardous Material Identification System (HMIS):** Health 1\*, Flammability 0, Reactivity 0

\*chronic effects

**National Fire Protection Association (NFPA):** Health 1, Flammability 0, Reactivity 0

Obtain special instructions before use. May cause cancer by inhalation. Avoid breathing dust or fume. Causes serious eye irritation. Causes mild skin irritation. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection.



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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance name	Value (%)	CAS No.	EC No.
Calcium carbonate (1)	40-60	471-34-1	207-439-9
Ultra Marine Blue	40-60	57455-37-5	None
Silica (crystalline quartz) (1)	0.1 - 1	14808-60-7	238-878-4

1 Calcium carbonate may contain crystalline silica at levels between 0.1 and 1.0 % and varies naturally.

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## SECTION 4: FIRST AID MEASURES

**EYES:** If product enters the eye do not rub, rubbing may cause abrasions. Flush eyes with copious amounts of water for 15 minutes, occasionally lifting upper and lower eyelids. If adverse effects persist after flushing with water, get medical aid.

**SKIN:** Wet clothing first to minimize dust generation, then; remove contaminated clothing and shoes. Wash contaminated clothing before wearing again. Wash infected areas with water and soap. Get medical attention in the event of irritation.

**INGESTION:** If this material is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, seek immediate medical attention. If alert, victim should drink up to three glasses of water. Do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. If victim is convulsing, maintain an open airway and obtain emergency medical attention.

**INHALATION:** If dust or particulates are inhaled, Remove from exposure and move to fresh air immediately. Encourage to blow nose to ensure clear breathing passages. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Show this data safety sheet to medical professionals.

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## SECTION 5: FIRE-FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Substance is noncombustible, however; the containers may burn, releasing carbon monoxide and carbon dioxide. Use appropriate extinguishing media for the combustible material involved in a fire.

**SPECIAL FIRE FIGHTING PROCEDURES:** As in any fire, wear self-contained breathing apparatus in pressure demand and full protective gear.

**FIRE EXTINGUISHING MEDIA:** Unless incompatibilities exist for surrounding materials, carbon dioxide, water spray, "ABC" type chemical extinguishers, foam, dry chemical and halon extinguishers can be used to fight fires involving this material.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Finely divided dusts from this material pose a hazard of an air/dust explosion in presence of an ignition source

**HAZARDOUS DECOMPOSITION PRODUCTS:** If oxidation of this product should occur, heat will be liberated which could cause surrounding combustibles to burn.



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## SECTION 6: ACCIDENTAL RELEASE MEASURES

**ACCIDENTAL RELEASE MEASURES:** Wear appropriate personal protective equipment. Do not allow this material to be released into the environment. Recover the product whenever possible. Avoid generating dust when sweeping or shoveling up. If required, wet the material with water to prevent creating dust. Pick up and place in a suitable container for reclamation or disposal.

**Cleanup of Small Spills:** Solids should be gently covered with wet absorbent pads. Clean spill with pad and dispose of properly. Decontaminate the spill area (three times) using a bleach and detergent solution and then rinse with clean water.

**Large Spills:** Restrict access to the spill areas. For spills of greater than 5 g, be sure not to generate dusts by gently covering with damp absorbent sheets, spill-control pads, pillows, cloths, or towels. The dispersion of particles into surrounding air and the possibility of inhalation is a serious matter and should be treated as such. Do not apply chemical in-activators as they may produce hazardous by-products. Sweep up or vacuum spilled solid (an explosion-proof vacuum should be used), avoiding the generation of airborne dusts. Decontaminate the area thoroughly.

**All Spills:** Use procedures described above and then place all spill residues in an appropriate, labeled container and seal. Move to a secure area. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations (see Section 13, Disposal Considerations). For spills on water, contain, minimize dispersion and collect. Dispose of recovered material and report spill per regulatory requirements.

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## SECTION 7: HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** All employees who handle this material should be trained to handle it safely. Open containers slowly on a stable surface. As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing airborne dusts generated by this product. Use in a well-ventilated area. Ensure this product is used with adequate ventilation and personal protective equipment (see Section 8, Exposure Controls and Personal Protection). Avoid airborne dusts generated by this product. Clean work areas routinely to prevent accumulation of dust. Clean up spills promptly.

**CONDITIONS FOR SAFE STORAGE:** Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials (see Section 10, Stability and Reactivity). Have appropriate extinguishing equipment in the storage area (e.g., sprinkler system, portable fire extinguishers). Keep container tightly closed when not in use. Refer to NFPA 654, *Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids* for additional information on storage.

**SPECIFIC END USE(S):** These products are used in chalk line devices in construction. Follow all industry standards for use of this product.

**PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:** Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely. Always use this product in areas where adequate ventilation is provided. Decontaminate equipment thoroughly, before maintenance begins. Collect all residue and dispose of according to applicable or applicable federal, state, provincial and local standards.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit 8-Hour TWA<sup>1</sup>(mg/m<sup>3</sup>)

Component	CAS No.	% by weight	OSHA PEL	ACGIH TLV	NIOSH REL
Calcium Carbonate (Limestone) (4)	471-34-1; (1317-65-3)	40-60	15(2), 5 (3)	10(2)	10(2), 5(3)
Ultra Marine Blue	57455-37-5	40-60	None	None	None
Silica-Crystalline Quartz (4)	14808-60-7	0.1-1.0	10(2,5),3.3(3,5)	0.05(3)	0.05(3)

<sup>1</sup>TWA = Time-weighted average

<sup>2</sup>Total dust.

<sup>3</sup>Respirable dust.

<sup>4</sup>Calcium carbonate may contain crystalline silica at levels between 0.1 and 1.0 % and varies naturally.

<sup>5</sup>Using the OSHA quartz formula, this PEL was calculated assuming crystalline silica content of 1.0% in this ingredient.

**SPECIAL NOTE:** The following information is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hand Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR 1910.132), equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02, Z94.3-M1982, Industrial Eye and Face Protectors and CSA Standard Z195-02, Protective Footwear), or standards of EU member states (including EN 529:2005 for respiratory PPE, CEN/TR 15419:2006 for hand protection, and CR 13464:1999 for face/eye protection). Please reference applicable regulations and standards for relevant details.

**ENGINEERING CONTROLS:** Facilities storing or utilizing this material should have potable water available for washing of eyes and skin. Use sufficient general area ventilation. To ensure exposure levels are maintained below the limits provided in this section if applicable.

**VENTILATION:** Local ventilation should be used.

**RESPIRATORY PROTECTION:** Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations. Oxygen levels below 20% are considered IDLH by U.S. OSHA. In such atmospheres, use of a full-face piece pressure/demand SCBA or a full face piece, supplied air respirator with auxiliary self-contained air supply is required under U.S. OSHA's Respiratory Protection Standard (1910.134-1998).

**EYE PROTECTION:** Wear safety goggles/glasses as appropriate for the task if dust or other particulates are present. Face shields maybe recommended if solutions are made. If necessary, refer to appropriate regulations.

**SKIN PROTECTION:** Use appropriate protective clothing for the task. Full-body protective clothing and gloves are recommended for emergency response procedures. If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** No information found.



**WORK HYGIENIC PRACTICES:** Wash contaminated clothing before reuse.

**EXPOSURE GUIDELINES:** No information found.



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PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate  
3 = Serious 4 = Severe \* = Chronic hazard

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Powder – Blue Color

**ODOR:** Odorless

**pH AS SUPPLIED:** 8.5-9.5 (at 10% solids)

**BOILING POINT:** No Data Available

**MELTING POINT:** Decomposes

F: 1517 Deg

C: 825Deg

**FREEZING POINT:** No Data Available.

**VAPOR PRESSURE (mmHg):** No Data Available.

**VAPOR DENSITY (AIR = 1):** No Data Available.

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** No Data Available.

**EVAPORATION RATE:** No Data Available.

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## SECTION 10: STABILITY AND REACTIVITY

**STABILITY:** Stable under normal temperatures and pressures.

**CONDITIONS TO AVOID (STABILITY):** Incompatible materials

**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong oxidizing agents, acids, aluminum, fluorine, magnesium, peroxides, hydrazine, calcium hypochlorite, performic acid, and bromine pentafluoride.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Carbon monoxide, carbon dioxide, calcium oxide.

**HAZARDOUS POLYMERIZATION:** Does not occur.

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## SECTION 11: TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL INFORMATION: SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE:** The most significant routes of industrial exposure to this product are by skin or eye contact and inhalation.

**INHALATION:** If dusts or particulates from these products are inhaled, irritation of the nose, throat, and lungs can occur. Symptoms may include sneezing, coughing, nasal congestion, and difficulty breathing. Symptoms are generally alleviated upon exposure to fresh air. If heated, chronic exposure to concentrations of silicon dioxide fume may cause chronic obstructive lung disease. Inhalation of iron oxide fume or dust is cause of pulmonary roentgen graphic appearance called siderosis, or an accumulation of iron that leads to reduced lung capacity. These products contain Crystalline Silica, which is a known human carcinogen. Chronic inhalation exposure to this material may cause silicosis, pulmonary fibrosis, bronchitis or present a hazard of cancer, due to the presence of Crystalline Silica.

**CONTACT WITH SKIN or EYES:** Skin contact may cause abrasion, redness, and discomfort. Prolonged and repeated skin exposure may cause dermatitis (dry, red skin). Direct eye contact with these products may cause stinging, abrasions, and redness. Dust can cause mechanical irritation to the eye. Repeated contact of dust with the eyes can cause conjunctivitis a disease that may cause eyes to become pink and sore), or can cause discoloration of the eyes.

**SKIN ABSORPTION:** This product does not pose a hazard of skin absorption.

**INGESTION:** Ingestion is an unlikely route of occupational exposure to this product. In the unlikely event that dusts from the product are ingested nausea, vomiting, and diarrhea may result.

Repeated ingestion of iron compounds can cause vomiting, diarrhea, pink urine, black stool, and liver or kidney damage. Repeated ingestion of iron compounds can also cause siderosis, which is an accumulation of iron in tissues.

**Chronic:** Repeated inhalation exposure of crystalline silica above safe levels may cause adverse effects to the respiratory system. Chronic inhalation may result in pulmonary fibrosis. This product contains crystalline silica, which is a known human carcinogen.

**SECTION 11 NOTES:** The International Agency for Research on Cancer (IARC) classified (quartz) crystalline silica (cs) as a probable carcinogen and in 1997 reclassified it as a Group 1 carcinogen, i.e., that there was sufficient evidence for carcinogenicity in experimental animals and sufficient evidence for carcinogenicity in humans. In its Ninth Annual Report on Carcinogens, the National Toxicology Program (NTP) listed crystalline silica as a known human carcinogen, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to respirable crystalline silica and increased lung cancer rates in workers exposed to crystalline silica dust. The International Agency for Research on Cancer (IARC) has evaluated crystalline silica and determined that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)."

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## SECTION 12: ECOLOGICAL INFORMATION

**ECOLOGICAL INFORMATION:** Safe practices must be in place to prevent environmental contamination.

**SECTION 12 NOTES:** These products have not been tested for aquatic or animal toxicity. All release to terrestrial, atmospheric and aquatic environments should be avoided.

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## SECTION 13: DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:** Waste from residue of this product is NOT hazardous waste according to the EPA regulations. Disposal by landfill may be acceptable. Waste disposal must follow all US Federal, State and Local (EPA) regulations, Canadian and European Governmental Guidelines.

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## SECTION 14: TRANSPORT INFORMATION

**U.S. DEPARTMENT OF TRANSPORTATION:** (DOT) These products are not classified as dangerous goods under the DOT regulations 49CFR: 172.101

**WATER TRANSPORTATION:** (IMO) Not classified as dangerous

**AIR TRANSPORTATION:** (ATA) Not classified as dangerous

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## SECTION 15: REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS

**OSHA:** Components are listed as air contaminants. Regulation standards -29CFR. Standard number 1910.100 Table 2-1

**TSCA** (TOXIC SUBSTANCE CONTROL ACT): All components are listed on the TSCA inventory

**CERCLA** (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not Listed

**SARA TITLE III** (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): The components of this product has been reviewed on the EAP Hazards Categories in section 311-312 and is considered a chronic health risk.

**STATE REGULATIONS:** This product can expose you to chemicals including Crystalline Silica which is known to the State of California to cause cancer. For more information, visit [www.p65Warnings.ca.gov](http://www.p65Warnings.ca.gov)

**CANADA WHIMS:** (Workplace Hazardous Materials Information System) This SDS sheet contains all of the information needed by the CPR. (Controlled Products Regulation)

**WHIMS CLASSIFICATION D2A:** Very toxic (carcinogenicity)

**EU CLASSIFICATION, LABELING:** This product does meet the definition of hazard class described by the EUROPEAN UNION COUNCIL DIRECTIVE EC# 1272/2008. Classification information for components Crystalline Silica. EU Classification (xn) Harmful EU risk r68/20 harmful: Risk of irreversible damage through inhalation.

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# SAFETY DATA SHEET

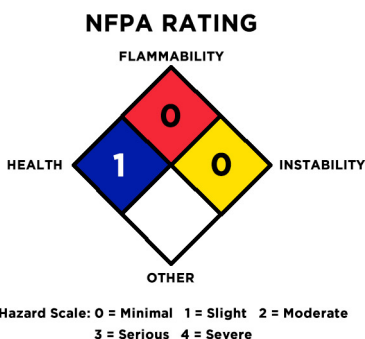
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## SECTION 16: OTHER INFORMATION

### Hazard Ratings:

**Hazardous Material Identification System (HMIS):** Health 1\*, Flammability 0, Reactivity 0\*chronic effects

**National Fire Protection Association (NFPA):** Health 1, Flammability 0, Reactivity 0



The contents and format of this SDS are in accordance with the U.S. Hazard Communication Standard 29 CFR 1910.1200; the Canadian CPR, and Workplace Hazardous Materials Information System (WHMIS); and EEC Commission Directive 1999/45/EC, and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

**DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are correct. However, the information is provided without any warranty, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

**End of document**

<b>IRWIN Chalk – Red, Permanent</b>	<b>December 23, 2016</b>
	<b>Revision 2</b>

**1. PRODUCT and COMPANY IDENTIFICATION**

Commercial Product Name: IRWIN Chalk – Red, Permanent

Company: IRWIN Tools

Use of product: Snap line mark

Emergency contact: 1-800-464-7946 8:00am-5:00pm Monday-Friday

**2. HAZARDS IDENTIFICATION****Hazards Identification: GHS Classification and Hazard Statement****Carcinogenicity** – May cause cancer (lung) Category 1A, H350**Signal Word: DANGER****Precautionary Statements**

P201 Obtain special instructions before use.

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

P280 Wear protective gloves and eye protection.

P308 and P313 If exposed or concerned, get medical advice/attention.

P405 Store locked up.

**Hazards Not Otherwise Classified or Not Covered by GHS:****Eye:** May cause irritation. Chalk dust is discomforting and abrasive to the eyes.**Skin:** Prolonged skin contact may cause irritation. When the product is used as intended, it is unlikely to cause discomfort.**Ingestion:** Ingestion of large amounts may cause gastrointestinal irritation. Ingestion is considered an unlikely route of entry in commercial or industrial environments.**Inhalation:** May cause respiratory tract irritation. When the product is used as intended, it is unlikely to cause discomfort.**Chronic:** Repeated and prolonged inhalation exposure to crystalline silica dust above exposure limits may cause delayed, chronic lung injury (silicosis). Prolonged inhalation of iron oxide dust is known to produce a benign lung condition known as siderosis. When the product is used as intended, dust levels should not exceed exposure limits. See Sections 8 and 11.**DANGER****Hazard Ratings:****Hazardous Material Identification System (HMIS):**

Health 2\*, Flammability 0, Reactivity 0 \*chronic effects

**National Fire Protection Association (NFPA):**

Health 2, Flammability 0, Reactivity 0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance name	Value (%)	CAS No.	EC No.
Calcium carbonate	75 - 80	471-34-1	207-439-9
Red Iron Oxide	20 - 25	1309-37-1	215-168-2
Silica (crystalline quartz) <sup>1</sup>	0.1 - 1	14808-60-7	238-878-4

<sup>1</sup> Calcium carbonate may contain crystalline silica at levels between 0.1 and 1.0 % and varies naturally.

# SAFETY DATA SHEET

IRWIN Chalk – Red, Permanent

## 4. FIRST AID MEASURES

**Inhalation:** Remove from exposure and move to fresh air immediately. Encourage the patient to blow nose to ensure clear breathing passages. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**Skin contact:** Wet clothing first to minimize dust generation, then; remove contaminated clothing and shoes. Launder contaminated clothing before wearing again. Wash affected area with water (and soap if available) Get medical aid in the event of irritation.

**Eye contact:** Do not rub eyes, rubbing may cause abrasions. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Ingestion:** If the victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

**Additional advice:** Show this safety data sheet to the doctor in attendance

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Substance is noncombustible, however; the containers may burn, releasing carbon monoxide, and carbon dioxide. Use appropriate extinguishing media for the combustible material involved in a fire.

**Explosion:** No information found.

**Specific hazards:** If oxidation of this product should occur, heat will be liberated which could cause surrounding combustibles to burn.

**Special protective equipment for Firefighters:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Wear appropriate personal protective equipment as specified in Section 8.

**Environmental precautions:** Do not allow this material to be released to the environment without proper governmental permits.

**Methods for cleaning up:** Recover the product whenever possible. Avoid generating dust when sweeping/shoveling up. If required, wet the material with water to prevent creating dust. Pick up and place in a suitable container for reclamation or disposal. Follow applicable OSHA regulations (29 CFR 1910.120)

## 7. HANDLING AND STORAGE

**Storage:** Store this product in a tightly-closed container in a dry, well-ventilated area away from incompatible substances.

**Handling:** Avoid creating, or breathing dust. Practice good personal hygiene, (hand washing, etc.) after using this product. Avoid contact with skin and eyes.

**Packaging material:** No information found.

# SAFETY DATA SHEET

IRWIN Chalk – Red, Permanent

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Component	CAS No.	% by weight	Exposure Limit 8-Hour TWA <sup>1</sup> (mg/m <sup>3</sup> )		
			OSHA PEL	ACGIH TLV	NIOSH REL
Calcium Carbonate (Limestone)	471-34-1; (1317-65-3)	70-75	15 <sup>2</sup> 5 <sup>3</sup>	10 <sup>2</sup>	10 <sup>2</sup> 5 <sup>3</sup>
Red Iron Oxide	1309-37-1	25-30	10	5 <sup>3</sup>	5
Silica-Crystalline Quartz <sup>4</sup>	14808-60-7	0.1-1.0	0.05 <sup>3</sup>	0.025 <sup>3</sup>	0.05 <sup>3</sup>

<sup>1</sup> TWA = Time-weighted average

<sup>2</sup> Total dust.

<sup>3</sup> Respirable dust.

<sup>4</sup> Calcium carbonate may contain crystalline silica at levels between 0.1 and 1.0 % and varies naturally.

**Exposure and Engineering Controls:** Facilities storing or utilizing this material should have potable water available for washing eyes and skin. Use sufficient general area (or outdoor) ventilation. Local exhaust ventilation should be used if airborne concentrations of dust exceed limits cited in Section 8.

### Personal protective equipment:

**Hand protection:** Wear protective gloves

**Eye protection:** Wear safety glasses, or chemical goggles in windy conditions or where eye contact is possible.

**Respiratory protection:** When engineering controls are not sufficient to reduce exposure, seek professional advice prior to respirator selection and use. Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**Hygiene measures:** Wash contaminated clothing before reuse.

**Environmental exposure controls:** No information found.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder
Color:	Black
Odor:	Odorless.
pH (at 10% solids):	8.5-9.5
Boiling point/range:	No data available.
Melting point/range:	Decomposes at 1,517 °F (825°C).
Flash point:	No data available.
Evaporation rate:	No data available.
Vapor density:	No data available.
Solubility in water:	<0.0002 (Trace)
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Vapor pressure:	No data available.
Relative density (H <sub>2</sub> O=1):	3.40-3.45
Viscosity:	No data available.
Partition coefficient (n-octanol/water):	No data available.

# SAFETY DATA SHEET

IRWIN Chalk – Red, Permanent

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal temperatures and pressures.

**Hazardous decomposition products:** Carbon monoxide, carbon dioxide, calcium oxide.

**Materials to avoid:** Strong oxidizing agents, acids, aluminum, fluorine, magnesium, peroxides hydrazine, calcium hypochlorite, performic acid, and bromine pentafluoride.

**Conditions to avoid:** Incompatible materials.

**Hazardous Polymerization:** Does not occur.

## 11. TOXICOLOGICAL INFORMATION

Note: Toxicological effects described in this section are those that would be expected based on data from the components of this product.

**Acute toxicity:** Calcium carbonate (CAS# 471-34-1): Draize test, rabbit, eye: 750 ug/24H Severe; Draize test, rabbit, skin: 500 mg/24H Moderate; Oral, rat: LD50 = 6,450mg/kg.

**Inhalation:** (Silica, crystalline quartz) Human: LC<sub>Lo</sub>: 300 µg/m<sup>3</sup>/ intermittent exposure over a 10-year period produced pulmonary system effects.

**Skin contact:** (Calcium carbonate) Rabbit: 500mg administered for 24 hours produces moderate skin irritation.

**Eye contact:** (Calcium carbonate) Rabbit: 0.750 mg administered for 24 hours produced severe irritation.

**Ingestion:** (Calcium carbonate) Rat: LD<sub>50</sub>: 6,450 mg/kg.  
(Iron Oxide) Rat: LD<sub>50</sub>: >5,000 mg/kg.

**Chronic toxicity/Carcinogenicity:** Repeated and prolonged inhalation exposure to crystalline silica dust above exposure limits may cause delayed, chronic lung injury (silicosis). When the product is used as intended, dust levels should not exceed exposure limits.

Quartz – crystalline silica:

The International Agency for Research on Cancer (IARC) has designated this substance Group 1, “carcinogenic to humans”.

The National Toxicology Program (NTP) has designated this substance: Group K “known to be a human carcinogen”

American Conference of Governmental Industrial Hygienists (ACGIH) has designated this substance A2; suspected human carcinogen. The agent is carcinogenic in experimental animals at dose levels, by route of administration, at sites of histologic type(s) or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

## 12. ECOLOGICAL INFORMATION

Bioaccumulation: No information found.

Ecotoxicity effects: No information found.

Fish Toxicity: Golden Orfe (*Leuciscus idus*) LC<sub>Lo</sub>: greater than 1,000 mg/l. Limestone (which is primarily composed of calcium carbonate) is not classified as a “Toxic pollutant” or a “hazardous substance under Section 307 and 311 of the United States Clean Water Act.

## 13. DISPOSAL CONSIDERATIONS

Waste from residues of this product is not a hazardous waste according to U.S. Environmental Protection Agency (EPA) regulations. Disposal by landfill may be acceptable.

Consult an expert on the disposal of recovered material for compliance with state, provincial, and/or local regulations.

# SAFETY DATA SHEET

IRWIN Chalk – Red, Permanent

## 14. TRANSPORT INFORMATION

**U.S. DOT:** Not regulated

**ADR/RID:** Not regulated

**IMDG:** Not regulated

**ICAO/IATA:** Not regulated

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations

**OSHA:** Ingredients are listed as air contaminants (29 CFR 1910.1000).

Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**TSCA** (Toxic Substance Control Act): All components of this product are listed on the TSCA inventory.

**CERCLA:** Hazardous Substance, (40 CFR 302.4): Not Listed.  
Extremely Hazardous Substance (40 CFR 355): Not Listed.

**SARA Hazard Category:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following category:

"An immediate (acute) and chronic health hazard."

Chemicals subject to the reporting requirements of Section 313 or Title III of SARA and 40 CFR Part 372: None.

### STATE REGULATIONS:

#### California's "Safe Drinking Water and Toxic Enforcement Act of 1986" (Proposition 65)

This product contains the following Proposition 65 regulated materials known to the State of California to cause cancer or reproductive harm. The listed typical amounts are a result of their natural presence in the raw materials from which this product is produced.

Silica-crystalline quartz	equal to, or less than 1.0 percent
---------------------------	------------------------------------

**CANADA WHIMS:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the SDS contains all of the information required by the CPR.

## 16. OTHER INFORMATION

The contents and format of this SDS are in accordance with the U.S. Hazard Communication Standard 29 CFR 1910.1200; the Canadian CPR, and Workplace Hazardous Materials Information System (WHMIS); and EEC Commission Directive 1999/45/EC, and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

# SAFETY DATA SHEET

IRWIN Chalk – Red, Permanent

**DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

End of document





## Safety Data Sheet

Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER

SDS ID: 82343

### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

**Material Name**

SAFETY-KLEEN HEAVY DUTY LACQUER THINNER

**Product Code**

5850, 5825, 6782

**Synonyms**

None

**Product Use**

For cleaning coating equipment (e.g., paint spray guns). If this product is used in combination with other products, refer to the Safety Data Sheet for those products.

**Restrictions on Use**

THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.

**MANUFACTURER/SUPPLIER**

Safety-Kleen Systems, Inc.  
2600 North Central Expressway  
Suite 200  
Richardson, TX 75080  
www.safety-kleen.com

**IMPORTER/DISTRIBUTOR**

Safety-Kleen Canada, Inc.  
25 Regan Road  
Brampton, Ontario, Canada L1A 1B2

Phone: 1-800-669-5740

Emergency Phone #: 1-800-468-1760

**Issue Date**

February 8, 2017

**Supersedes Issue Date**

February 1, 2016

**Original Issue Date**

July 20, 1989

### Section 2 - HAZARDS IDENTIFICATION

**Classification in accordance with Schedule 1 of Hazardous Products Regulations (HPR)(SOR/2015-17) and paragraph (d) of 29 CFR 1910.1200.**

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Acute Toxicity - Oral - Category 4

Acute Toxicity - Dermal - Category 4

Acute Toxicity - Inhalation - Vapor - Category 2

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 1

Germ Cell Mutagenicity - Category 1B

Carcinogenicity - Category 1B

Reproductive Toxicity - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 2

## Safety Data Sheet

Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782

SDS ID: 82343

### GHS Label Elements

#### Symbol(s)



#### Signal Word

Danger

#### Hazard Statement(s)

Highly flammable liquid and vapor.  
May be fatal if swallowed and enters airways.  
Fatal if inhaled.  
Harmful if swallowed or in contact with skin.  
Causes skin irritation and serious eye damage.  
May cause genetic defects and cancer.  
Suspected of damaging fertility or the unborn child.  
May cause respiratory irritation and drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.

#### Precautionary Statement(s)

##### Prevention

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

##### Response

In case of fire: Use carbon dioxide, regular foam, regular dry chemical and water spray.  
IF exposed or concerned: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Rinse mouth.

##### Storage

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

##### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

##### Statement(s) of Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown acute toxicity.

##### Other Hazards

None known.

## Safety Data Sheet

**Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782**

**SDS ID: 82343**

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component	Percent
63231-51-6	Aromatic hydrocarbons	30-75
*MIXTURE	Ketones	0-60
**MIXTURE	Aliphatic hydrocarbons	0-60
***MIXTURE	Acetates	0-17
763-69-9	Ethyl 3-ethoxypropanoate	0-17
68475-56-9	Alcohols, C1-3	0-12
****MIXTURE	Other alcohols	0-10
*****MIXTURE	Chlorinated solvents	0-1
<b>Component Information/Information on Non-Hazardous Components</b>		
*Mixture of 67-64-1, 78-93-3, 108-10-1, 110-43-0, 107-87-9 **Mixture of 64741-89-5, 8030-6 ***Mixture of 123-86-4, 110-19-0, 108-21-4, 108-65-6, 141-78-6 ****Mixture of 71-36-3, 75-65-0 *****Mixture of 75-09-2, 127-18-4, 71-55-6		

### Section 4 - FIRST AID MEASURES

#### **Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

#### **Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

#### **Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

#### **Ingestion**

IF SWALLOWED: Aspiration hazard. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

#### **Most Important Symptoms/Effects**

##### **Acute**

May be fatal if swallowed and enters airways. Fatal if inhaled. Harmful if swallowed or in contact with skin. Causes skin irritation, central nervous system damage, liver damage, respiratory tract irritation, central nervous system depression, eye burns, kidney damage, blood damage, lung damage (from aspiration).

##### **Delayed**

Mutagenic effects, cancer, reproductive effects, and central nervous system, nervous system, kidney, liver, blood, respiratory system, and lung damage.

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

IF exposed: Call a POISON CENTER or doctor/physician. Treat symptomatically and supportively.

### Section 5 - FIRE FIGHTING MEASURES

#### **Extinguishing Media**

## Safety Data Sheet

Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782

SDS ID: 82343

### Suitable Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

### Unsuitable Extinguishing Media

Do not use high-pressure water streams.

### Special Hazards Arising from the Chemical

Highly flammable liquid and vapor. Vapors may form explosive mixture with air. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Fire may produce irritating, poisonous and/or corrosive fumes. Runoff may create fire or explosion hazard. Empty product containers may retain product residue and can be dangerous. Containers may rupture or explode.

### Hazardous Combustion Products

Burning may produce: Phosgene, chlorides, chloroacetylenes, formaldehyde, peracetic acid, carbon monoxide and unidentified organic compounds.

### Fire Fighting Measures

Keep storage containers cool with water spray. Move container from fire area if it can be done without risk. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Stay away from the ends of tanks. Do not scatter spilled material with high-pressure water streams. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck, evacuation radius: 800 meters (1/2 mile). Stay upwind and keep out of low areas. Dike for later disposal.

### Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

## Section 6 - ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

### Methods and Materials for Containment and Cleaning Up

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal. There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see SECTION 15: REGULATORY INFORMATION.

## Section 7 - HANDLING AND STORAGE

### Precautions for Safe Handling

Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring large quantities of product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes Skin clothing shoes. Do not smoke while using this product. Wash thoroughly after handling.

### Conditions for Safe Storage, Including any Incompatibilities

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

# Safety Data Sheet

**Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782**

**SDS ID: 82343**

Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Store in a dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Empty product containers may retain product residue and can be dangerous. See SECTION 14: TRANSPORTATION INFORMATION for Packing Group information.

## Incompatible Materials

Combustible materials, strong acids, strong oxidizing materials, alkalis, reducing agents, reactive halogens, reactive metals.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### Component Exposure Limits

<b>Toluene</b>	<b>108-88-3</b>
ACGIH:	20 ppm TWA
NIOSH:	100 ppm TWA ; 375 mg/m3 TWA; 150 ppm STEL ; 560 mg/m3 STEL 500 ppm IDLH
OSHA (US):	200 ppm TWA; 300 ppm Ceiling
Alberta	50 ppm TWA ; 188 mg/m3 TWA Substance may be readily absorbed through intact skin
British Columbia, Nova Scotia, Ontario, Prince Edward Island	20 ppm TWA
Manitoba	20 ppm TWA; Skin - potential for cutaneous absorption
New Brunswick	50 ppm TWA ; 188 mg/m3 TWA; Skin - potential for cutaneous absorption
Northwest Territories, Nunavut	50 ppm TWA; 60 ppm STEL; Skin notation
Quebec	50 ppm TWAEV ; 188 mg/m3 TWAEV; Skin designation
Saskatchewan	50 ppm TWA; 60 ppm STEL; Potentially harmful after absorption through skin or mucous membranes
Yukon	100 ppm TWA ; 375 mg/m3 TWA; 150 ppm STEL ; 560 mg/m3 STEL Skin notation
<b>Naphtha</b>	<b>8030-30-6</b>
NIOSH:	100 ppm TWA ; 400 mg/m3 TWA; 1000 ppm IDLH (10% LEL )
OSHA (US):	100 ppm TWA ; 400 mg/m3 TWA
Alberta, New Brunswick	400 ppm TWA ; 1590 mg/m3 TWA
British Columbia	(reciprocal calculation method - see OHS Guideline G5.48-12 )
Northwest Territories; Nunavut; Saskatchewan	400 ppm TWA; 500 ppm STEL
Quebec	400 ppm TWAEV ; 1590 mg/m3 TWAEV

# Safety Data Sheet

**Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782**

**SDS ID: 82343**

Yukon	400 ppm TWA (Rubber solvent and Coal tar ); 1800 mg/m3 TWA (Rubber solvent and Coal tar ) 500 ppm STEL (Rubber solvent and Coal tar ); 2250 mg/m3 STEL (Rubber solvent and Coal tar )
<b>2-Pentanone, 4-methyl-</b>	<b>108-10-1</b>
ACGIH:	20 ppm TWA; 75 ppm STEL
NIOSH:	50 ppm TWA ; 205 mg/m3 TWA; 75 ppm STEL ; 300 mg/m3 STEL 500 ppm IDLH
OSHA (US):	100 ppm TWA ; 410 mg/m3 TWA
Alberta, New Brunswick	50 ppm TWA ; 205 mg/m3 TWA; 75 ppm STEL ; 307 mg/m3 STEL
British Columbia, Nova Scotia, Ontario, Prince Edward Island	20 ppm TWA; 75 ppm STEL
Manitoba	20 ppm TWA
Northwest Territories, Nunavut, Saskatchewan	50 ppm TWA; 75 ppm STEL
Quebec	50 ppm TWA EV ; 205 mg/m3 TWA EV; 75 ppm STEV ; 307 mg/m3 STEV
Yukon	100 ppm TWA ; 410 mg/m3 TWA; 125 ppm STEL ; 510 mg/m3 STEL Skin notation
<b>Methyl n-amyl ketone</b>	<b>110-43-0</b>
ACGIH:	50 ppm TWA
NIOSH:	100 ppm TWA ; 465 mg/m3 TWA; 800 ppm IDLH
OSHA (US):	100 ppm TWA ; 465 mg/m3 TWA
Alberta, New Brunswick	50 ppm TWA ; 233 mg/m3 TWA
British Colombia, Manitoba, Nova Scotia, Prince Edward Island	50 ppm TWA
Northwest Territories, Nunavut, Saskatchewan	50 ppm TWA; 60 ppm STEL
Ontario	25 ppm TWA ; 115 mg/m3 TWA
Quebec	50 ppm TWA EV ; 233 mg/m3 TWA EV
Yukon	100 ppm TWA ; 465 mg/m3 TWA; 150 ppm STEL ; 710 mg/m3 STEL
<b>Methyl ethyl ketone</b>	<b>78-93-3</b>
ACGIH:	200 ppm TWA; 300 ppm STEL

# Safety Data Sheet

**Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782**

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NIOSH:	200 ppm TWA ; 590 mg/m3 TWA; 300 ppm STEL ; 885 mg/m3 STEL; 3000 ppm IDLH
OSHA (US):	200 ppm TWA ; 590 mg/m3 TWA
Alberta, New Brunswick	200 ppm TWA ; 590 mg/m3 TWA; 300 ppm STEL ; 885 mg/m3 STEL
British Columbia	50 ppm TWA; 100 ppm STEL
Manitoba	200 ppm TWA
Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Saskatchewan	200 ppm TWA; 300 ppm STEL
Quebec	50 ppm TWAEV ; 150 mg/m3 TWAEV; 100 ppm STEV ; 300 mg/m3 STEV
Yukon	200 ppm TWA ; 590 mg/m3 TWA; 250 ppm STEL ; 740 mg/m3 STEL
<b>Methyl propyl ketone</b>	<b>107-87-9</b>
ACGIH:	150 ppm STEL
NIOSH:	150 ppm TWA ; 530 mg/m3 TWA; 1500 ppm IDLH
OSHA (US):	200 ppm TWA ; 700 mg/m3 TWA
Alberta, New Brunswick	200 ppm TWA ; 705 mg/m3 TWA; 250 ppm STEL ; 881 mg/m3 STEL
British Columbia	150 ppm TWA; 250 ppm STEL
Northwest Territories, Nunavut, Saskatchewan	200 ppm TWA; 250 ppm STEL
Nova Scotia, Ontario, Prince Edward Island	150 ppm STEL
Quebec	150 ppm TWAEV ; 530 mg/m3 TWAEV
Yukon	200 ppm TWA ; 700 mg/m3 TWA; 250 ppm STEL ; 875 mg/m3 STEL
<b>Acetone</b>	<b>67-64-1</b>
ACGIH:	250 ppm TWA; 500 ppm STEL
NIOSH:	250 ppm TWA ; 590 mg/m3 TWA; 2500 ppm IDLH (10% LEL )
OSHA (US):	1000 ppm TWA ; 2400 mg/m3 TWA
Alberta	500 ppm TWA ; 1200 mg/m3 TWA; 750 ppm STEL ; 1800 mg/m3 STEL
British Columbia, Nova Scotia, Prince Edward Island	250 ppm TWA; 500 ppm STEL
Manitoba	250 ppm TWA
New Brunswick	500 ppm TWA ; 1188 mg/m3 TWA; 750 ppm STEL ; 1782 mg/m3 STEL
Northwest Territories, Nunavut, Ontario, Saskatchewan	500 ppm TWA; 750 ppm STEL

# Safety Data Sheet

**Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782**

**SDS ID: 82343**

Quebec	500 ppm TWAEV ; 1190 mg/m3 TWAEV; 1000 ppm STEV ; 2380 mg/m3 STEV
Yukon	1000 ppm TWA ; 2400 mg/m3 TWA; 1250 ppm STEL ; 3000 mg/m3 STEL
<b>Ethyl 3-ethoxypropanoate</b>	<b>763-69-9</b>
Ontario	50 ppm TWA ; 300 mg/m3 TWA
<b>Ethyl acetate</b>	<b>141-78-6</b>
ACGIH:	400 ppm TWA
NIOSH:	400 ppm TWA ; 1400 mg/m3 TWA; 2000 ppm IDLH (10% LEL )
OSHA (US):	400 ppm TWA ; 1400 mg/m3 TWA
Alberta, New Brunswick	400 ppm TWA ; 1440 mg/m3 TWA
British Columbia	150 ppm TWA
Manitoba, Nova Scotia, Ontario, Prince Edward Island	400 ppm TWA
Northwest Territories, Nunavut, Saskatchewan	400 ppm TWA; 500 ppm STEL
Quebec	400 ppm TWAEV ; 1440 mg/m3 TWAEV
Yukon	400 ppm TWA ; 1400 mg/m3 TWA; 400 ppm STEL ; 1400 mg/m3 STEL
<b>Propylene glycol monomethyl ether acetate</b>	<b>108-65-6</b>
British Columbia	50 ppm TWA; 75 ppm STEL
Ontario	50 ppm TWA ; 270 mg/m3 TWA
<b>Isopropyl acetate</b>	<b>108-21-4</b>
ACGIH:	100 ppm TWA; 200 ppm STEL
NIOSH:	1800 ppm IDLH
OSHA (US):	250 ppm TWA ; 950 mg/m3 TWA
Alberta	100 ppm TWA ; 416 mg/m3 TWA; 200 ppm STEL ; 832 mg/m3 STEL
British Columbia, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Saskatchewan	100 ppm TWA; 200 ppm STEL
Manitoba	100 ppm TWA
New Brunswick	250 ppm TWA ; 1040 mg/m3 TWA; 310 ppm STEL ; 1290 mg/m3 STEL
Quebec	250 ppm TWAEV; 1040 mg/m3 TWAEV; 310 ppm STEV; 1290 mg/m3 STEV
Yukon	250 ppm TWA ; 950 mg/m3 TWA; 310 ppm STEL ; 1185 mg/m3 STEL



# Safety Data Sheet

**Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782**

**SDS ID: 82343**

<b>n-Butyl acetate</b>	<b>123-86-4</b>
ACGIH:	50 ppm TWA; 150 ppm STEL
NIOSH:	150 ppm TWA ; 710 mg/m3 TWA; 200 ppm STEL ; 950 mg/m3 STEL; 1700 ppm IDLH (10% LEL )
OSHA (US):	150 ppm TWA ; 710 mg/m3 TWA
Alberta, New Brunswick	150 ppm TWA ; 713 mg/m3 TWA; 200 ppm STEL ; 950 mg/m3 STEL
British Columbia	20 ppm TWA
Manitoba	50 ppm TWA
Northwest Territories, Nunavut, Ontario, Saskatchewan	150 ppm TWA; 200 ppm STEL
Nova Scotia, Prince Edward Island	50 ppm TWA; 150 ppm STEL
Quebec	150 ppm TWAEV ; 713 mg/m3 TWAEV 200 ppm STEV ; 950 mg/m3 STEV
Yukon	150 ppm TWA ; 710 mg/m3 TWA 200 ppm STEL ; 950 mg/m3 STEL
<b>Isobutyl acetate</b>	<b>110-19-0</b>
ACGIH:	50 ppm TWA; 150 ppm STEL
NIOSH:	150 ppm TWA ; 700 mg/m3 TWA; 1300 ppm IDLH (10% LEL )
OSHA (US):	150 ppm TWA ; 700 mg/m3 TWA
Alberta, New Brunswick,	150 ppm TWA ; 713 mg/m3 TWA
British Columbia, Ontario	150 ppm TWA
Manitoba	50 ppm TWA
Northwest Territories, Nunavut, Saskatchewan	150 ppm TWA; 188 ppm STEL
Nova Scotia, Prince Edward Island	50 ppm TWA; 150 ppm STEL
Quebec	150 ppm TWAEV ; 713 mg/m3 TWAEV
Yukon	150 ppm TWA ; 700 mg/m3 TWA; 187 ppm STEL ; 875 mg/m3 STEL
<b>tert-Butyl alcohol</b>	<b>75-65-0</b>
ACGIH:	100 ppm TWA
NIOSH:	100 ppm TWA ; 300 mg/m3 TWA; 150 ppm STEL ; 450 mg/m3 STEL; 1600 ppm IDLH
OSHA (US):	100 ppm TWA ; 300 mg/m3 TWA

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Alberta, New Brunswick	100 ppm TWA ; 303 mg/m3 TWA
British Columbia, Manitoba, Nova Scotia, Ontario, Prince Edward Island	100 ppm TWA
Northwest Territories, Nunavut, Saskatchewan	100 ppm TWA; 125 ppm STEL
Quebec	100 ppm TWAEV ; 303 mg/m3 TWAEV
Yukon	100 ppm TWA ; 300 mg/m3 TWA; 150 ppm STEL ; 450 mg/m3 STEL
<b>1-Butanol</b>	<b>71-36-3</b>
ACGIH:	20 ppm TWA
NIOSH:	50 ppm Ceiling ; 150 mg/m3 Ceiling; potential for dermal absorption; 1400 ppm IDLH (10% LEL )
OSHA (US):	100 ppm TWA ; 300 mg/m3 TWA
Alberta	20 ppm TWA ; 60 mg/m3 TWA
British Columbia	15 ppm TWA; 30 ppm Ceiling
Manitoba	20 ppm TWA; Skin - potential for cutaneous absorption
New Brunswick	50 ppm Ceiling ; 152 mg/m3 Ceiling; Skin - potential for cutaneous absorption
Northwest Territories, Nunavut, Saskatchewan	20 ppm TWA; 30 ppm STEL
Nova Scotia, Ontario, Prince Edward Island	20 ppm TWA
Quebec	50 ppm Ceiling ; 152 mg/m3 Ceiling; Skin designation
Yukon	Skin notation
<b>Tetrachloroethylene</b>	<b>127-18-4</b>
ACGIH:	25 ppm TWA; 100 ppm STEL
NIOSH:	150 ppm IDLH
OSHA (US):	100 ppm TWA; 200 ppm Ceiling
Alberta	25 ppm TWA ; 170 mg/m3 TWA; 100 ppm STEL ; 678 mg/m3 STEL
British Columbia, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Saskatchewan	25 ppm TWA; 100 ppm STEL
Manitoba	25 ppm TWA
New Brunswick	25 ppm TWA ; 170 mg/m3 TWA;100 ppm STEL ; 685 mg/m3 STEL
Quebec	25 ppm TWAEV ; 170 mg/m3 TWAEV; 100 ppm STEV ; 685 mg/m3 STEV

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Yukon	100 ppm TWA ; 670 mg/m3 TWA; 150 ppm STEL ; 1000 mg/m3 STEL Skin notation
<b>Methylene chloride</b>	<b>75-09-2</b>
ACGIH:	50 ppm TWA
NIOSH:	2300 ppm IDLH
OSHA (US):	25 ppm TWA; 125 ppm STEL (See 29 CFR 1910.1052 ) 15 min ; 12.5 ppm Action Level (See 29 CFR 1910.1052 ); 25 ppm TWA (See 29 CFR 1910.1052 ); 125 ppm STEL (see 29 CFR 1910.1052 )
Alberta, New Brunswick	50 ppm TWA ; 174 mg/m3 TWA
British Colombia	25 ppm TWA
Manitoba, Nova Scotia, Ontario, Prince Edward Island	50 ppm TWA
Northwest Territories, Nunavut, Saskatchewan	50 ppm TWA; 75 ppm STEL (regulated under Dichloromethane ); 63 ppm STEL
Quebec	50 ppm TWAEV ; 174 mg/m3 TWAEV
Yukon	200 ppm TWA ; 700 mg/m3 TWA ; 720 mg/m3 TWA (regulated under Dichloromethane ); 250 ppm STEL ; 870 mg/m3 STEL ; 200 ppm STEL (regulated under Dichloromethane ); 720 mg/m3 STEL (regulated under Dichloromethane )
<b>1,1,1-Trichloroethane</b>	<b>71-55-6</b>
ACGIH:	350 ppm TWA; 450 ppm STEL
NIOSH:	350 ppm Ceiling 15 min ; 1900 mg/m3 Ceiling 15 min 700 ppm IDLH
OSHA (US):	350 ppm TWA ; 1900 mg/m3 TWA
Alberta, New Brunswick	350 ppm TWA ; 1910 mg/m3 TWA; 450 ppm STEL ; 2460 mg/m3 STEL
British Columbia, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Saskatchewan	350 ppm TWA; 450 ppm STEL
Manitoba	350 ppm TWA
Quebec	350 ppm TWAEV ; 1910 mg/m3 TWAEV; 450 ppm STEV ; 2460 mg/m3 STEV
Yukon	350 ppm TWA ; 1900 mg/m3 TWA; 440 ppm STEL ; 2400 mg/m3 STEL

### ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

#### Toluene (108-88-3)

0.02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene ; 0.03 mg/L Medium: urine Time:

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end of shift Parameter: Toluene ; 0.3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background )

**2-Pentanone, 4-methyl- (108-10-1)**

1 mg/L Medium: urine Time: end of shift Parameter: MIBK

**Methyl ethyl ketone (78-93-3)**

2 mg/L Medium: urine Time: end of shift Parameter: MEK (nonspecific )

**Acetone (67-64-1)**

25 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific )

**Tetrachloroethylene (127-18-4)**

3 ppm Medium: end-exhaled air Time: prior to shift Parameter: Tetrachloroethylene ; 0.5 mg/L Medium: blood Time: prior to shift Parameter: Tetrachloroethylene

**Methylene chloride (75-09-2)**

0.3 mg/L Medium: urine Time: end of shift Parameter: Dichloromethane (semi-quantitative )

**1,1,1-Trichloroethane (71-55-6)**

40 ppm Medium: end-exhaled air Time: prior to last shift of workweek Parameter: Methyl chloroform ; 10 mg/L

Medium: urine Time: end of workweek Parameter: Trichloroacetic acid (nonspecific, semi-quantitative ) ; 30 mg/L

Medium: urine Time: end of shift at end of workweek Parameter: Total trichloroethanol (nonspecific, semi-quantitative ) ;

1 mg/L Medium: blood Time: end of shift at end of workweek Parameter: Total trichloroethanol (nonspecific )

### Engineering Controls

Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Use explosion-proof equipment. Ensure compliance with applicable exposure limits.

### Individual Protection Measures, such as Personal Protective Equipment

#### Eye/face protection

Wear splash resistant safety goggles with a faceshield. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. Contact lens use is not recommended.

#### Skin Protection

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

#### Respiratory Protection

A respiratory protection program which meets USA's OSHA General Industry Standard 29 CFR 1910.134 or Canada's CSA Standard Z94.4-M1982 requirements must be followed whenever workplace conditions warrant a respirator's use. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

#### Glove Recommendations

Where skin contact is likely, wear chemical impervious protective gloves; use of natural rubber (latex), polyvinyl chloride (PVC), neoprene or equivalent gloves is not recommended.

#### Protective Materials

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: Safety glasses, gloves, lab coat or apron.

<b>Section 9 - PHYSICAL AND CHEMICAL PROPERTIES</b>
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## Safety Data Sheet

**Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782**

**SDS ID: 82343**

<b>Appearance</b>	Clear liquid.	<b>Physical State</b>	Liquid
<b>Odor</b>	Solvent odor.	<b>Color</b>	Colorless.
<b>Odor Threshold</b>	Not available	<b>pH</b>	Not available
<b>Melting Point</b>	-129 - -22 °C (-200 - -8 °F )	<b>Boiling Point</b>	56 - 172 °C (133 - 342 °F )
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	3.7 (Similar product Butyl acetate = 1 )	<b>Flammability (solid, gas)</b>	Flammable.
<b>Autoignition Temperature</b>	427 °C (800 °F )	<b>Flash Point</b>	<21 °C [Closed Cup. ] (70 °F )
<b>Lower Explosive Limit</b>	1 vol% (Approximate )	<b>Decomposition temperature</b>	Not available
<b>Upper Explosive Limit</b>	13 vol% (Approximate )	<b>Vapor Pressure</b>	86 mm Hg @ 68 °F (20 °C. )
<b>Vapor Density (air=1)</b>	2.2 - 3.9 (Approximate Air = 1 )	<b>Specific Gravity (water=1)</b>	0.83 (Approximate Water = 1 )
<b>Water Solubility</b>	(Slight )	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	Not available	<b>Solubility (Other)</b>	Not available
<b>Density</b>	6.9 lb/gal (US Approximate )	<b>Physical Form</b>	Liquid.
<b>Volatility</b>	80 - 100 wt% (as per 40 CFR part 51.100(s) )	<b>Molecular Weight</b>	Not available
<b>OSHA Flammability Class</b>	Flammable		
<b>Volatile Organic Compounds (As regulated)</b>	Up to 100 WT %; 6.9 LB/US gal; 830 g/l As per 40 CFR Part 51.100(s) Photochemically reactive (up to 100% by volume) VOC VP = 86 mm Hg @ 20°C (approx.) Consult your state or local air district regulations for location specific information.		

### Other Information

No additional information is available.

## Section 10 - STABILITY AND REACTIVITY

### Reactivity

No reactivity hazard is expected.

### Chemical Stability

Stable under normal temperatures and pressures.

### Possibility of Hazardous Reactions

Will not polymerize under normal temperature and pressure conditions.

### Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition Avoid contact with incompatible materials.

### Incompatible Materials

Acids, alkalis, oxidizing agents, reducing agents, reactive halogens, or reactive metals.

### Hazardous decomposition products

Not applicable under normal conditions of use and storage. See also SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.

## Safety Data Sheet

Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782

SDS ID: 82343

### Section 11 - TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

##### Inhalation

Fatal if inhaled. May cause irritation, nausea, central nervous system effects. May cause drowsiness or dizziness. May cause respiratory irritation.

##### Skin Contact

Harmful in contact with skin. Causes skin irritation.

##### Eye Contact

Causes serious eye damage.

##### Ingestion

May be fatal if swallowed and enters airways. Aspiration Hazard. Harmful if swallowed. May cause, throat irritation, nausea, vomiting, diarrhea.

#### Acute and Chronic Toxicity

##### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

##### **Toluene (108-88-3)**

Oral LD50 Rat 2600 mg/kg; Dermal LD50 Rabbit 12000 mg/kg; Inhalation LC50 Rat 12.5 mg/L 4 h

##### **Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)**

Oral LD50 Rat >15 g/kg; Dermal LD50 Rabbit >5 g/kg; Inhalation LC50 Rat 2.18 mg/L 4 h

##### **Naphtha (8030-30-6)**

Oral LD50 Rat >5 g/kg

##### **2-Pentanone, 4-methyl- (108-10-1)**

Oral LD50 Rat 2080 mg/kg; Dermal LD50 Rabbit 3000 mg/kg; Inhalation LC50 Rat 8.2 mg/L 4 h

##### **Methyl n-amyl ketone (110-43-0)**

Oral LD50 Rat 1600 mg/kg; Dermal LD50 Rabbit 12.6 mL/kg; Inhalation LC50 Rat 2000 - 4000 ppm 6 h

##### **Methyl ethyl ketone (78-93-3)**

Oral LD50 Rat 2483 mg/kg; Dermal LD50 Rabbit 5000 mg/kg; Inhalation LC50 Rat 11700 ppm 4 h

##### **Methyl propyl ketone (107-87-9)**

Oral LD50 Rat 1600 mg/kg; Dermal LD50 Rat 6480 mg/kg; Inhalation LC50 Rat 2000 - 4000 ppm 4 h

##### **Acetone (67-64-1)**

Oral LD50 Rat 5800 mg/kg; Dermal LD50 Rabbit >15700 mg/kg; Inhalation LC50 Rat 50100 mg/m<sup>3</sup> 8 h

##### **Ethyl 3-ethoxypropanoate (763-69-9)**

Oral LD50 Rat 5 g/kg; Dermal LD50 Rabbit >9500 mg/kg; Inhalation LC50 Rat >5.96 mg/L 6 h (no deaths occurred )

##### **Ethyl acetate (141-78-6)**

Oral LD50 Rat 5620 mg/kg; Dermal LD50 Rabbit >18000 mg/kg; Inhalation LC50 Mouse 1500 ppm 4 h

##### **Propylene glycol monomethyl ether acetate (108-65-6)**

Oral LD50 Rat 8532 mg/kg; Dermal LD50 Rabbit >5 g/kg

##### **Isopropyl acetate (108-21-4)**

Oral LD50 Rat 3000 mg/kg; Dermal LD50 Rabbit >17436 mg/kg; Inhalation LC50 Rat 50600 mg/m<sup>3</sup> 8 h

##### **n-Butyl acetate (123-86-4)**

Oral LD50 Rat 10768 mg/kg; Dermal LD50 Rabbit >17600 mg/kg; Inhalation LC50 Rat 390 ppm 4 h

##### **Isobutyl acetate (110-19-0)**

Oral LD50 Rat 15400 mg/kg; Dermal LD50 Rabbit >17400 mg/kg

##### **tert-Butyl alcohol (75-65-0)**

Oral LD50 Rat 2200 mg/kg; Dermal LD50 Rabbit >2 g/kg (no deaths occurred ); Inhalation LC50 Rat >10000 ppm 4 h

##### **1-Butanol (71-36-3)**

Oral LD50 Rat 700 mg/kg; Dermal LD50 Rabbit 3402 mg/kg; Inhalation LC50 Rat >8000 ppm 4 h

##### **Tetrachloroethylene (127-18-4)**

Oral LD50 Rat 2629 mg/kg; Dermal LD50 Mouse 2800 mg/kg; Inhalation LC50 Rat 27.8 mg/L 4 h

##### **Methylene chloride (75-09-2)**

Oral LD50 Rat 1600 mg/kg; Inhalation LC50 Rat 53 mg/L 6 h

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**Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782**

**SDS ID: 82343**

## 1,1,1-Trichloroethane (71-55-6)

Oral LD50 Rat 9600 mg/kg; Dermal LD50 Rabbit >15800 mg/kg; Inhalation LC50 Rat 18000 ppm 4 h

### Product Toxicity Data

#### Acute Toxicity Estimate

Dermal	1555.2924 mg/kg
Inhalation - Vapor	1.2614 mg/L
Oral	555.5845 mg/kg

### Immediate Effects

Fatal if inhaled, Harmful in contact with skin. harmful if swallowed, eye burns, skin irritation, respiratory tract irritation, aspiration hazard, central nervous system damage, central nervous system depression, respiratory system damage, liver damage, kidney damage, lung damage (from aspiration).

### Delayed Effects

Mutagenic effects, cancer, reproductive effects, central nervous system damage, nervous system damage, kidney damage, liver damage, respiratory system damage, blood damage, lung damage.

### Irritation/Corrosivity Data

Eye burns, skin irritation, respiratory tract irritation.

### Respiratory Sensitization

No information available for the product.

### Dermal Sensitization

No information available for the product.

### Component Carcinogenicity

<b>Toluene</b>	<b>108-88-3</b>
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999] ; Monograph 47 [1989] (Group 3 (not classifiable))
<b>2-Pentanone, 4-methyl-</b>	<b>108-10-1</b>
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 101 [2013] (Group 2B (possibly carcinogenic to humans))
OSHA:	Present
<b>Acetone</b>	<b>67-64-1</b>
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
<b>tert-Butyl alcohol</b>	<b>75-65-0</b>
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
<b>Tetrachloroethylene</b>	<b>127-18-4</b>
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 106 [2014] ; Monograph 63 [1995] ; Supplement 7 [1987] (Group 2A (probably carcinogenic to humans))

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NTP:	Reasonably Anticipated To Be A Human Carcinogen
DFG:	Category 3B (could be carcinogenic for man )
OSHA:	Present
NIOSH:	potential occupational carcinogen
<b>Methylene chloride</b>	<b>75-09-2</b>
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 110 [in preparation] ; Monograph 71 [1999] (Group 2A (probably carcinogenic to humans))
NTP:	Reasonably Anticipated To Be A Human Carcinogen
DFG:	Category 5 (low carcinogenic potency )
OSHA:	Present
OSHA:	see 29 CFR 1910.1052
NIOSH:	potential occupational carcinogen
<b>1,1,1-Trichloroethane</b>	<b>71-55-6</b>
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999] ; Supplement 7 [1987] ; Monograph 20 [1979] (Group 3 (not classifiable))

May cause cancer.

### **Germ Cell Mutagenicity**

May cause genetic defects.

### **Tumorigenic Data**

No data available

### **Reproductive Toxicity**

Available data characterizes this substance as a reproductive hazard.

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

Central nervous system, respiratory system.

### **Specific Target Organ Toxicity - Repeated Exposure**

Nervous system, kidneys, liver, blood,

### **Aspiration hazard**

This material is an aspiration hazard.

### **Medical Conditions Aggravated by Exposure**

Blood disorders, central nervous system disorders, eye disorders, hearing or inner ear disorders, kidney disorders, liver disorders, nervous system disorders, respiratory disorders, skin disorders, heart disorders, systemic disorders.

## Section 12 - ECOLOGICAL INFORMATION



# Safety Data Sheet

Material Name: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782

SDS ID: 82343

## Ecotoxicity

Harmful to aquatic life with long lasting effects.

## Component Analysis - Aquatic Toxicity

<b>Toluene</b>	<b>108-88-3</b>
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through ] (1 day old ); LC50 96 h Pimephales promelas 12.6 mg/L [static ]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through ]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static ]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static ]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static ]; LC50 96 h Oryzias latipes 54 mg/L [static ]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static ]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static ]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID ; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static ] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [Static ] EPA ; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
<b>Distillates, petroleum, solvent-refined light paraffinic</b>	<b>64741-89-5</b>
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Naphtha</b>	<b>8030-30-6</b>
Fish:	LC50 96 h Lepomis macrochirus 9.2 mg/L [static ]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
<b>2-Pentanone, 4-methyl-</b>	<b>108-10-1</b>
Fish:	LC50 96 h Pimephales promelas 496 - 514 mg/L [flow-through ]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 400 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 170 mg/L IUCLID
<b>Methyl n-amyl ketone</b>	<b>110-43-0</b>
Fish:	LC50 96 h Pimephales promelas 126 - 137 mg/L [flow-through ]
<b>Methyl ethyl ketone</b>	<b>78-93-3</b>
Fish:	LC50 96 h Pimephales promelas 3130 - 3320 mg/L [flow-through ]
Invertebrate:	EC50 48 h Daphnia magna >520 mg/L IUCLID ; EC50 48 h Daphnia magna 5091 mg/L IUCLID ; EC50 48 h Daphnia magna 4025 - 6440 mg/L [Static ] EPA
<b>Methyl propyl ketone</b>	<b>107-87-9</b>
Fish:	LC50 96 h Pimephales promelas 1190 - 1290 mg/L [flow-through ]

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<b>Acetone</b>	<b>67-64-1</b>
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L; LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static ]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [Static ] EPA ; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID
<b>Ethyl 3-ethoxypropanoate</b>	<b>763-69-9</b>
Fish:	LC50 96 h Pimephales promelas 62 mg/L [static ]
Invertebrate:	EC50 48 h Daphnia magna 970 mg/L IUCLID
<b>Ethyl acetate</b>	<b>141-78-6</b>
Fish:	LC50 96 h Pimephales promelas 220 - 250 mg/L [flow-through ]; LC50 96 h Oncorhynchus mykiss 484 mg/L [flow-through ]; LC50 96 h Oncorhynchus mykiss 352 - 500 mg/L [semi-static ]
Invertebrate:	EC50 48 h Daphnia magna 560 mg/L [Static ] EPA
<b>Propylene glycol monomethyl ether acetate</b>	<b>108-65-6</b>
Fish:	LC50 96 h Pimephales promelas 161 mg/L [static ]
Invertebrate:	EC50 48 h Daphnia magna >500 mg/L IUCLID
<b>n-Butyl acetate</b>	<b>123-86-4</b>
Fish:	LC50 96 h Lepomis macrochirus 100 mg/L [static ]; LC50 96 h Pimephales promelas 17 - 19 mg/L [flow-through ]
Algae:	EC50 72 h Desmodesmus subspicatus 674.7 mg/L IUCLID
<b>tert-Butyl alcohol</b>	<b>75-65-0</b>
Fish:	LC50 96 h Pimephales promelas 6130 - 6700 mg/L [flow-through ]
Algae:	EC50 72 h Desmodesmus subspicatus >1000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 933 mg/L IUCLID ; EC50 48 h Daphnia magna 4607 - 6577 mg/L [Static ] EPA
<b>1-Butanol</b>	<b>71-36-3</b>
Fish:	LC50 96 h Pimephales promelas 1730 - 1910 mg/L [static ]; LC50 96 h Pimephales promelas 1740 mg/L [flow-through ]; LC50 96 h Lepomis macrochirus 100000 - 500000 µg/L [static ]; LC50 96 h Pimephales promelas 1910000 µg/L [static ]
Algae:	EC50 96 h Desmodesmus subspicatus >500 mg/L IUCLID ; EC50 72 h Desmodesmus subspicatus >500 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 1983 mg/L IUCLID ; EC50 48 h Daphnia magna 1897 - 2072

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	mg/L [Static ] EPA
<b>Tetrachloroethylene</b>	<b>127-18-4</b>
Fish:	LC50 96 h Pimephales promelas 12.4 - 14.4 mg/L [flow-through ] ; LC50 96 h Pimephales promelas 8.6 - 13.5 mg/L [static ] ; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static ] ; LC50 96 h Oncorhynchus mykiss 4.73 - 5.27 mg/L [flow-through ]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >500 mg/L EPA
Invertebrate:	EC50 48 h Daphnia magna 6.1 - 9 mg/L [Static ] EPA
<b>Methylene chloride</b>	<b>75-09-2</b>
Fish:	LC50 96 h Pimephales promelas 140.8 - 277.8 mg/L [flow-through ] ; LC50 96 h Pimephales promelas 262 - 855 mg/L [static ] ; LC50 96 h Lepomis macrochirus 193 mg/L [static ] ; LC50 96 h Lepomis macrochirus 193 mg/L [flow-through ]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >500 mg/L EPA ; EC50 72 h Pseudokirchneriella subcapitata >500 mg/L EPA
Invertebrate:	EC50 48 h Daphnia magna 1532 - 1847 mg/L [Static ] EPA ; EC50 48 h Daphnia magna 190 mg/L IUCLID
<b>1,1,1-Trichloroethane</b>	<b>71-55-6</b>
Fish:	LC50 96 h Pimephales promelas 35.2 - 50.7 mg/L [flow-through ] ; LC50 96 h Lepomis macrochirus 57 - 90 mg/L [static ] (juvenile ) ; LC50 96 h Cyprinus carpio 56 mg/L [flow-through ] ; LC50 96 h Poecilia reticulata 52.9 mg/L [flow-through ] ; LC50 96 h Poecilia reticulata 69.7 mg/L [static ] ; LC50 96 h Pimephales promelas 91 - 126 mg/L [static ] ; LC50 96 h Oncorhynchus mykiss 46 - 59 mg/L [static ]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >500 mg/L EPA
Invertebrate:	LC50 48 h Daphnia magna >530 mg/L IUCLID ; EC50 48 h Daphnia magna 2384 mg/L IUCLID ; EC50 48 h Daphnia magna 9.7 - 12.8 mg/L [Static ] EPA

### **Invertebrate Toxicity**

No additional information is available.

### **Persistence and Degradability**

No information available for the product.

### **Bioaccumulative Potential**

No information available for the product.

### **Mobility**

No information available for the product.

### **Other Toxicity**

No additional information is available.

## Section 13 - DISPOSAL CONSIDERATIONS

### **Disposal Methods**

Dispose of in accordance with all applicable federal, state and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal. D001, D018, D035, D039. Based on available data, this

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information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

### Section 14 - TRANSPORT INFORMATION

**US DOT Information:**

**Shipping Name:** PAINT RELATED MATERIAL

**Hazard Class:** 3

**UN/NA #:** UN1263

**Packing Group:** II

**Required Label(s):** 3 FLAMMABLE LIQUID

**IATA Information:**

**Shipping Name:** PAINT RELATED MATERIAL

**Hazard Class:** 3

**UN#:** UN1263

**Packing Group:** II

**Required Label(s):** 3 FLAMMABLE LIQUID

**TDG Information:**

**Shipping Name:** PAINT RELATED MATERIAL

**Hazard Class:** 3

**UN#:** UN1263

**Packing Group:** II

**Required Label(s):** 3 FLAMMABLE LIQUID

**Additional information**

Emergency Response Guide Number 128 Reference .North American Emergency Response Guidebook

### Section 15 - REGULATORY INFORMATION

**U.S. Federal Regulations**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

<b>Toluene (108-88-3), 1-Butanol (71-36-3), Methylene Chloride (75-09-2), 1,1,1-Trichlorethylene (71-55-6)</b>	
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ ; 454 kg final RQ
<b>2-Pentanone, 4-methyl- 108-10-1</b>	
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ ; 2270 kg final RQ
<b>Methyl ethyl ketone (78-93-3), Acetone (67-64-1), Ethyl Acetate (141-78-6), n-Butyl acetate (123-86-4), Isobutyl acetate (110-19-0)</b>	

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CERCLA:	5000 lb final RQ ; 2270 kg final RQ
<b>tert-Butyl alcohol (75-65-0),</b>	
SARA 313:	1 % de minimis concentration
<b>Tetrachloroethylene (127-18-4)</b>	
SARA 313:	0.1 % de minimis concentration
CERCLA:	100 lb final RQ ; 45.4 kg final RQ

**SARA Section 311/312 (40 CFR 370 Subparts B and C) 2016 reporting categories**

**Acute Health:** Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

**SARA Section 311/312 (40 CFR 370 Subparts B and C) 2017 reporting categories**

Flammable; Carcinogenicity; Acute toxicity; Reproductive Toxicity; Skin Corrosion/Irritation; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity; Aspiration Hazard; Germ Cell Mutagenicity

**U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

Component	CA	MA	MN	NJ	PA
<b>Naphtha (8030-30-6), 2-Pentanone, 4-methyl-(108-10-1) Methyl n-amyl ketone (110-43-0), Methyl ethyl ketone (78-93-3), Methyl propyl ketone (107-87-9), Acetone (67-64-1), Ethyl acetate (141-78-6), Isopropyl acetate (108-21-4), n-Butyl acetate (123-86-4) Isobutyl acetate(110-19-0), tert-Butyl alcohol (75-65-0), 1-Butanol (71-36-3),Tetrachloroethylene (127-18-4), Methylene chloride (75-09-2)1,1,1-Trichloroethane (71-55-6)</b>	Yes	Yes	Yes	Yes	Yes
<b>Distillates, petroleum, solvent-refined light paraffinic (64741-89-5)</b>	No	Yes	No	No	No

**THIS PRODUCT IS NOT FOR SALE OR USE IN THE STATE OF CALIFORNIA.**

**Canada Regulations**

**Canadian WHMIS Ingredient Disclosure List (IDL)**

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

<b>Toluene (108-88-3), 2-Pentanone, 4-methyl- (108-10-1), Methyl n-amyl ketone (110-43-0), Methyl ethyl ketone (78-93-3), Methyl propyl ketone (107-87-9), Acetone (67-64-1), Ethyl acetate (141-78-6), Isopropyl acetate (108-21-4), n-Butyl acetate (123-86-4), Isobutyl acetate (110-19-0), tert-Butyl alcohol (75-65-0), 1-Butanol (71-36-3), Tetrachloroethylene (127-18-4), Methylene chloride (75-09-2), 1,1,1-Trichloroethane (71-55-6)</b>
1 %

**Component Analysis - Inventory**

Hydrocarbons, aromatic (63231-51-6) Toluene (108-88-3), Distillates, petroleum, solvent-refined light paraffinic (64741-89-5), Naphtha (8030-30-6), 2-Pentanone, 4-methyl- (108-10-1), Methyl n-amyl ketone (110-43-0), Methyl ethyl ketone (78-93-3), Methyl propyl ketone (107-87-9), Acetone (67-64-1), Alcohols, C1-3 (68475-56-9), Ethyl 3-ethoxypropanoate (763-69-9), Ethyl acetate (141-78-6), Propylene glycol monomethyl ether acetate (108-65-6), Isopropyl acetate (108-21-4), n-Butyl acetate (123-86-4),

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Isobutyl acetate (110-19-0), tert-Butyl alcohol (75-65-0), 1-Butanol (71-36-3), Tetrachloroethylene (127-18-4), Methylene chloride (75-09-2), 1,1,1-Trichloroethane (71-55-6)

US	CA
No	No

### Section 16 - OTHER INFORMATION

#### NFPA Ratings

Health: 4 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

#### Summary of Changes

Revision to comply with WHMIS 2015

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CPR - Controlled Products Regulations; DOT - Department of Transportation; DSL - Domestic Substances List; EPA - Environmental Protection Agency; F - Fahrenheit; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NDSL - Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; RCRA - Resource Conservation and Recovery Act; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; WHMIS - Workplace Hazardous Materials Information System (Canada).

#### Other Information

##### Disclaimer:

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplied to the user.



**Safety Data Sheet**  
**MINERAL SPIRITS**

Version: 2.0  
Date: 06/01/2020

**1. Identification**

<b>Product Name</b>	<b>Mineral Spirits</b>
<b>Recommended Use</b>	<i>Mineral Spirits is a widely-used solvent, paint thinner, spot remover, asphalt reducer, hand cleaners, parts cleaners, a million uses and applications.</i>
<b>Company</b>	Solvents and Petroleum Services, Inc. 1405 Brewerton Rd Syracuse, NY 13208 800-315-4467 mark@solventsandpetroleum.com
<b>Emergency Telephone Number</b>	Chemtrec 1-800-424-9300 (24HRS)

**2. Hazards Identification**

<b>GHS Classification</b>	Flammable Liquids Category 3 Aspiration Hazard Category 1 Eye Irritation Category 2B Skin Irritation Category 2 Specific Target Organ Toxicity-Single Exposure (narcotic effects) – Category 3 Static Accumulating Liquid
<b>Signal Word</b>	WARNING
<b>Hazard Statements</b>	Flammable liquid and vapor May be fatal if swallowed and enters airways. Causes eye irritation Causes skin Irritation May cause respiratory irritation; or May cause drowsiness or dizziness
<b>Other Hazard Information</b>	Static accumulating liquid can become electrostatically charged even in bonded and grounded equipment Sparks may ignite liquid and vapor may cause flash fire. Liquid conductivity is <100 pS/m (picosiemans/meter) at 77°F
<b>GHS Pictogram</b>	
<b>Precautionary Statements</b>	<b>Do not breathe mist or vapors</b> <b>Use only outdoors or in a well-ventilated area</b>

## 2. Hazards Identification

**If inhaled:** Remove person to fresh air and keep comfortable for breathing.

**Call a poison center/doctor if you feel unwell.**

**If swallowed:** immediately call a poison center or doctor.

**Do NOT induce vomiting.**

**Store Locked up**

**Store in a well-ventilated place.**

**Wear protective gloves/clothing/eye protection/face protection**

**Keep away from heat/sparks/open flames/hot surfaces. –No smoking**

**Keep container tightly closed**

**Ground/bond container and receiving equipment. This alone may be insufficient to remove static electricity.**

**Use explosion-proof electrical/ventilating/lighting equipment.**

**Use only non-sparking tools**

**If on skin:** take off immediately all contaminated clothing. Rinse skin with water/shower.

**Store in a well-ventilated place. Keep cool.**

**Wash thoroughly after handling.**

**If in eyes:** rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**If eye irritation persists:** get medical attention/advice.

**If skin irritation occurs:** Get medical advice/attention.

**Take off contaminated clothing and wash it before reuse.**

**Dispose of contents in accordance with local/regional/national/international regulations**

## 3. Composition / Information on Ingredients

CAS No.	Component	Common Name	Percent
8052-41-3	Stoddard solvent	Mineral Spirits	100%

Hazardous Constituents contained in complex substances

CAS No.	Component	Common Name	Percent
111-84-2	Nonane	Nonane	1.0-7.0
25551-13-7	Trimethyl Benzene (mixed Isomers)	Hemellitene, Pseudocumene, mesitylene	0.5-4.0

## 4. First Aid Measures

**Eyes**

Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

**Skin**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse.



#### 4. First Aid Measures

**Inhalation**

Get medical attention immediately.

**Ingestion**

Move exposed person to fresh air.

DO NOT INDUCE VOMITING. If conscious, rinse out mouth with water.

**Symptoms(Acute and delayed)**

Exposure to high concentrations of vapors may cause irritation to the eyes, nose and throat, nausea, and dizziness.

**Note to Physicians**

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

#### 5. Fire Fighting Measures

**Suitable Extinguishing Media**

Use dry chemical, CO<sub>2</sub>, water spray (FOG) or foam

**Unsuitable Extinguishing Media**

Avoid solid water stream as it may scatter and spread fire.

**Specific Hazards Arising from Chemical**

Elevated temperatures can lead to the formation of irritating vapors. Decomposing products may include the following materials: Carbon dioxide and Carbon monoxide.

This product is a static accumulating liquid. Static accumulating liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor may cause flash fire. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Restrict flow velocity to avoid build-up of static charge. Refer to NFPA 77, API 2003, and CENELEC CLC/TR 50404 for further guidance.

**Protective Equipment and Precautions for Firefighters**

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

#### 6. Accidental Release Measures

**Personal Precautions**

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. 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.

**Environmental Precautions**

Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

**Methods for Containment**

Stop leak if without risk. Use absorbent pads or earthen dams to contain.

**Methods for Cleanup**

A vapor suppressing foam may be used to reduce vapors. Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled container

#### 7. Handling and Storage

**Handling Procedures**

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

## 7. Handling and Storage

clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Use non-sparking tools.

### Shipping and Storing Procedures

Store in accordance with local regulations. Store in a segregated and approved area. Keep in the original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Do not store in unlabeled containers. Store and use away from heat, sparks, open flame or any other ignition source. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers that retain product residue may be hazardous.

### Incompatibilities:

Oxidizing Agents

## 8. Exposure Controls / Personal Protection

### Component Exposure Limits

#### Stoddard Solvent

**ACGIH TLV:** TWA: 100 ppm    TWA: N/A mg/m<sup>3</sup>    STEL: N/A ppm    STEL: N/A mg/m<sup>3</sup>

**OSHA PEL:** TWA: 500 ppm    TWA: 2900 mg/m<sup>3</sup>    STEL: N/A ppm    STEL: N/A mg/m<sup>3</sup>

**NIOSH REL:** TWA: N/A ppm    TWA: 350 mg/m<sup>3</sup>    STEL: N/A ppm    STEL: N/A mg/m<sup>3</sup>

**NIOSH Ceiling:** 1800 mg/m<sup>3</sup> (15 minutes)

#### Nonane

**ACGIH TLV:** TWA: 200 ppm    TWA: N/A mg/m<sup>3</sup>    STEL: N/A ppm    STEL: N/A mg/m<sup>3</sup>

#### Trimethyl Benzene (all isomers)

**ACGIH TLV:** TWA: 25 ppm    TWA: N/A mg/m<sup>3</sup>    STEL: N/A ppm    STEL: N/A mg/m<sup>3</sup>

N/A signifies not available

### Engineering Controls

This product is a static accumulating liquid. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Material should be handled in enclosed vessels and equipment. Use only in 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.

### Eye/Face Protection

Chemical goggles and face shield.

### Skin Protection

Chemical resistant, impervious gloves complying with an approved standard should be worn at all times. Coveralls, apron, and boots as necessary to minimize contact.

### Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicated this is necessary. Respirator selection must be based on known or anticipated exposure levels.

### General Hygiene

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.

## 9. Physical and Chemical Properties

*Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Please see the Product Specification Sheet for further information.*

<b>Appearance</b>	Colorless	<b>Flammability</b>	Not Available
<b>Physical State</b>	Liquid	<b>Upper/Lower Flammability Limits</b>	Not Available
<b>Odor</b>	Petroleum Solvent	<b>Vapor Pressure (mm Hg at 20°C)</b>	0.62
<b>Odor Threshold</b>	Not Available	<b>Vapor Density</b>	Not Available
<b>pH</b>	Not Available	<b>Relative Density (lbs/gal)</b>	6.43
<b>Melting/Freezing Point (°F)</b>	Not Available	<b>Water Soluble</b>	No
<b>Initial Boiling Point (°F)</b>	>640	<b>Partition Coefficient: n-octanol/water</b>	Not Available
<b>Boiling Range (°F)</b>	Not Available	<b>Auto-ignition Temperature (°F)</b>	Not Available
<b>Flash Point (°F)</b>	105	<b>Decomposition Temperature (°F)</b>	Not Available
<b>Evaporation Rate</b>	Not Available	<b>Viscosity (40°C mm<sup>2</sup>/s)</b>	1.8

## 10. Chemical Stability & Reactivity Information

<b>Reactivity</b>	Polymerization will not occur
<b>Chemical Stability</b>	Stable under normal conditions. If heated, product's static accumulation will rise and could cause flash fire.
<b>Hazardous Reactions</b>	None, under normal processing.
<b>Conditions to Avoid</b>	High temperatures, flames, sparks
<b>Incompatibility</b>	Strong acids and oxidizing materials
<b>Hazardous Decomposition Products</b>	Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

## 11. Toxicological Information

<b>Acute Exposure</b>	
<b>Respiratory Irritation</b>	An inhalation hazard may only arise if product is used in aerosol conditions or if heated up. If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and upper respiratory tract.
<b>Eye Irritation</b>	Causes mild eye irritation that is reversible with proper care.
<b>Skin Irritation</b>	Causes mild skin irritation that is reversible with proper care.
<b>Sensitization</b>	Not expected to cause skin or respiratory sensitization.
<b>Aspiration Hazard</b>	If swallowed can be aspirated into lungs and cause chemical pneumonia, varying degrees of pulmonary injury or death. If swallowed, do NOT induce vomiting.
<b>Chronic Exposure</b>	
<b>Target Organ Effects</b>	Vapor/aerosol concentrations above recommended exposure levels are irritating

to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects including death.

Prolonged or repeated direct exposure to the skin results in symptoms of irritation and redness, dermatitis or oil acne.

<b>Carcinogenicity</b>	No data available to indicate product or any components present at greater than .1% are carcinogenic.
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than .1% are mutagenic or genotoxic.
<b>Reproductive Toxicity</b>	No data available to indicate either product or components present at greater than .1% that may cause reproductive toxicity.
<b>Teratogenicity</b>	No data available to indicate product or any components contained at greater than .1% may cause birth defects.

#### Analysis – LD50 / LC50

<b>Inhalation LC50 Rat</b>	>5 mg/L (4Hr mist)
<b>Oral LD50 Rat</b>	>5000 mg/kg
<b>Dermal LD50 Rabbit</b>	>2000 mg/kg

### 12. Ecological Information

#### Component Analysis- Ecotoxicity – Aquatic Life

Duration/Test/Species	Concentration/Conditions
96 hr LL50 <i>Oncorhynchus mykiss</i>	8.2 mg/L
48 hr EL50 <i>Oncorhynchus mykiss</i>	32 mg/L
96 hr EL50 <i>Scenedesmus subspicatus</i>	45 mg/L
Chronic Survival NOELR Aquatic Vertebrates	2.6 mg/L
Chronic Growth NOELR Aquatic Vertebrates	2.6 mg/L
Chronic Survival NOELR <i>Daphnia magna</i>	16 mg/L
Chronic Reproduction EL 50 <i>Daphnia magna</i>	10 mg/L
Chronic reproduction NOELR <i>Daphnia magna</i>	2.6 mg/L

<b>Persistence &amp; Degradability</b>	Inherently biodegradable
<b>Bioaccumulation Potential</b>	Not Available
<b>Soil Mobility</b>	Not Available
<b>Other Adverse Effects</b>	Not Available




### 13. Disposal Considerations

#### Disposal Instructions

### 13. Disposal Considerations

The generation of waste should be avoided or minimized wherever possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

### 14. Transportation Information

Emergency Response Guide No.		128	<i>North American Emergency Response Guide Book</i>		
	UN Number	Shipping Name (technical name)	Hazard Class	Packing Group	Labels/Placard
<b>U.S. DOT Bulk (over 119 gallons)</b>	1268	Petroleum Distillates, N.O.S. (Naphtha Solvent)	Combustible Liquid	III	
<b>U.S. DOT Non-Bulk</b>		Not Regulated			Exempt from labeling and placarding unless shipped via air or vessel
<b>IATA</b>	1268	Petroleum Distillates, N.O.S. (Naphtha Solvent)	3	III	
<b>IMDG</b>	1268	Petroleum Distillates, N.O.S. (Naphtha Solvent)	3	III	

### 15. Regulatory Information

#### SARA Extremely Hazardous Substances (Sections 302 & 304)

#### SARA Section 313

This product does not contain greater than 1% of any “extremely hazardous substances” listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B. This product contains the following components in concentrations greater than 0.1% for carcinogenic substances and/or 1.0% of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

1,2,4 Trimethylbenzene (CASRN: 95-63-6): 2.7%

## 15. Regulatory Information

<b>SARA Section 311 &amp; 312 Classifications</b>	<b>Acute Hazard</b>	Yes
	<b>Chronic Hazard</b>	Yes
	<b>Fire Hazard</b>	Yes
	<b>Reactivity Hazard</b>	No

<b>CERCLA</b>	This product contains the following components listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4: NONE
<b>California Prop 65</b>	This product contains chemical(s) known to the state of California to cause cancer and/or birth defects.

### Global Chemical Inventories

Inventory	
US TSCA	Present*
EU	Present
Japan	Not available
Australia	Present
New Zealand	Present
Canada	Present
Switzerland	Not available
Korea	Present
Philippines	Present
China	Present
Taiwan	Not available

\* May be subject to TSCA 12b export notification. Contains Nonane (CASRN: 111-84-2) at 7 %.

## 16. Other Information

### US NFPA Ratings

Health	Fire	Reactivity
1	2	0

### HMIS Ratings

Health	Fire	Physical Hazards
1	2	0

*The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.*

**End of SDS**

Conforms to Hazard Communication Standard 29 CFR 1910.1200

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## Section 1 - IDENTIFICATION

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**Product Identifier:** Spectracide PRO® Wasp & Hornet Killer

**Other Means of Identification:**

Product Code HG-30110; HG-80110LW  
Formula Number 21-1519  
EPA Reg. Number 9688-141-8845

**Recommended Use:** Insecticide - Wasp & Hornet, aerosol

**Recommended Restrictions:** Use in accordance with label directions

**Manufacturer/Importer/Supplier/Distributor Information:**

Company Name Spectrum Group, Division of United Industries Corporation  
Address PO Box 142642, St. Louis, MO 63114-0642  
Telephone Number 1-800-917-5438

**Emergency Telephone Number:**

CHEMTREC (800)424-9300  
Medical (866)823-2749

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## Section 2 - HAZARD(S) IDENTIFICATION

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**Classification of Substance or Mixture:**

Physical Hazard(s) Flammable Aerosol - Category 2  
Gases Under Pressure - Low Pressure Liquefied Gas  
Health Hazard(s) Aspiration Toxicity - Category 1  
Eye Irritation - Category 2B  
Skin Sensitization - Category 1

**Label Elements:**

Hazard Pictogram(s)



Signal Word

DANGER

Hazard Statements:

Flammable aerosol

Contains gas under pressure; may explode if heated

May be fatal if swallowed and enters airways

Causes eye irritation

May cause an allergic skin reaction

Precautionary Statements:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Store locked up.

Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Wash hands thoroughly after handling.

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice. Wash contaminated clothing before reuse.

Dispose of contents in accordance with all local, state/provincial and federal regulations. For more information see product label.

**Hazard(s) not Otherwise Classified (HNOC):** No additional information available

**Supplemental Information:** None

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### Section 3 - COMPOSITION/INFORMATION ON INGREDIENTS

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Chemical Name	Synonyms	CAS Number	%
Distillates (petroleum), hydrotreated light	n/a	64742-47-8	91.20
Propane	n/a	74-98-6	≤8.0
Piperonyl Butoxide	n/a	51-03-6	0.50
Permethrin	n/a	52645-53-1	0.25
Tetramethrin	n/a	7696-12-0	0.10

In accordance with paragraph (d) of 1910.1200, the exact percentage (concentration) has been withheld as a trade secret. Other components are below reportable levels.

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### Section 4 - FIRST-AID MEASURES

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<b>Inhalation:</b>	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
<b>Skin Contact:</b>	In case of contact, wash skin with plenty of water for 15 minutes. If skin irritation or redness develops, seek medical attention.
<b>Eye Contact:</b>	In case of contact, flush eyes with plenty of water for 15 minutes. Remove contact lenses, if worn. If irritation persists, get medical attention.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.
<b>Most Important Symptoms/Effects, Acute and Delayed:</b>	Symptoms of exposure may include, irritation of eyes and nose, cough and/or shortness of breath.
<b>Indication of Immediate Medical Attention &amp; Special Treatment Needed:</b>	Immediate medical attention should not be required.

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### Section 5 - FIRE-FIGHTING MEASURES

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<b>Suitable Extinguishing Media:</b>	Treat for surrounding material.
<b>Unsuitable Extinguishing Media:</b>	None known.



**Specific Hazards Arising from the Chemical:**  
**Special Protective Equipment and Precautions for Firefighters:**

Products of combustion may include, and are not limited to: oxides of carbon.  
Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respirator protection (SCBA).

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**Section 6 - ACCIDENTAL RELEASE MEASURES**

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**Personal Precautions, Protective Equipment and Emergency Procedures:**  
**Methods and Materials for Containment and Cleaning Up:**

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.  
Contain and/or absorb spill with inert material. Scoop up material and place in a disposable container. Then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate personal protective equipment (PPE).  
Report spills as required by local and national regulations. Prevent entry into storm sewers and waterways.

**Environmental Precautions:**

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**Section 7 - HANDLING AND STORAGE**

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**Precautions for Safe Handling:**

Avoid breathing mist. Avoid contact with skin and eyes. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Wear protective gloves. Wash hands thoroughly after handling.

**Conditions for Safe Storage, Including any Incompatibilities:**

Keep out of reach of children. Keep container tightly closed. Keep away from heat/sparks/open flames/hot surfaces. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Store locked up (See section 10).

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**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**Control Parameters:**

Chemical Name	Exposure Limits					
	OSHA PEL		ACGIH TLV		Supplier OEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Distillates (petroleum), hydrotreated light	-	-	-	TWA 200 (as total hydro-carbon vapor, 8hr)	-	-
Propane	TWA 1000	TWA 1800	TWA 1000	-	-	-

**Appropriate Engineering Controls:**

General ventilation should be adequate for all normal use.

**Individual Protective Measures, Such as Personal Protective Equipment:**

Eye/face protection:

None required for normal use. Avoid eye contact.

Skin and body protection:

Wear protective gloves. Avoid skin contact.

Respiratory protection:

None required under normal use conditions.

General hygiene considerations: Do not eat, drink or smoke where material is handled, processed or stored. Wash hands after handling.

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### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance (physical state, color, etc.):</b>	Clear, water-white to pale yellow liquid
<b>Odor:</b>	Aliphatic solvent & pyrethroid
<b>Odor Threshold:</b>	No data available
<b>pH:</b>	6.4
<b>Melting / Freezing Point:</b>	No data available
<b>Initial boiling point and range:</b>	No data available
<b>Flashpoint:</b>	No data available
<b>Evaporation Rate:</b>	No data available
<b>Flammability (solid, gas):</b>	No data available
<b>Upper/lower flammability or explosive limits:</b>	No data available
<b>Vapor pressure:</b>	No data available
<b>Vapor density:</b>	No data available
<b>Relative density:</b>	0.787
<b>Solubility(ies):</b>	Insoluble in water
<b>Partition coefficient (n-octanol/water):</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity:</b>	No data available

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### Section 10 - STABILITY AND REACTIVITY

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<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical stability:</b>	Stable under normal storage conditions.
<b>Possibility of hazardous reactions:</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid:</b>	Heat. Incompatible materials.
<b>Incompatible materials:</b>	None known.
<b>Hazardous decomposition products:</b>	May include, and are not limited to oxides of carbon.

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### Section 11 - TOXICOLOGICAL INFORMATION

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**Information on the likely routes of exposure:** Inhalation, Ingestion and/or skin or eye contact

**Symptoms related to the physical, chemical and toxicological characteristics:**

Inhalation:	May cause respiratory tract irritation.
Ingestion:	May be fatal if swallowed and enters airway. May cause stomach distress, nausea or vomiting.

Skin contact: May cause skin irritation or allergic reaction. Symptoms may include redness, drying, defatting and cracking of the skin.

Eye contact: Causes eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

**Acute Toxicity Values:**

Calculated overall Chemical Acute Toxicity Values (ATE)		
LD50 (Oral)	LD50 (Dermal)	LC50 (inhalation)
>5000 mg/kg	>5000 mg/kg	>4.73 mg/l

**Eye Contact:** This product is an eye irritant.

**Skin Contact:** Based on available data, the classification criteria are not met.

**Sensitization:** This product is a skin sensitizer.

**Chronic Effects-Carcinogenicity:**

Ingredient	Chemical Listed as a Carcinogen or Potential Carcinogen (NTP, IARC, OSHA)
None of the ingredients present in this product at or above 0.1% are listed as potential carcinogens on the NTP, IARC or OSHA lists.	

**Reproductive Toxicity:** Based on available data, the classification criteria are not met.

**Germ Cell Mutagenicity:** Based on available data, the classification criteria are not met.

**STOT-single exposure:** Based on available data, the classification criteria are not met.

**STOT-repeated exposure:** Based on available data, the classification criteria are not met.

**Aspiration hazard:** This product is an aspiration hazard.

**Comment:** All information was generated using the GHS classification criteria for mixtures and test data where available.

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**Section 12 - ECOLOGICAL INFORMATION**

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**Ecotoxicity:** Per GHS, this product is classified as a category 1 aquatic acute toxicant and a category 1 aquatic chronic toxicant.

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**Other adverse effects:** No data available

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**Section 13 - DISPOSAL CONSIDERATIONS**

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Dispose of in accordance with all local, state,/provincial and federal regulations. For more information see product label.

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**Section 14 - TRANSPORTATION INFORMATION**

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<b>DOT:</b>	UN Number:	UN1950
	Proper Shipping Name:	Aerosols
	Hazard Class:	2.1
	Packing Group:	None
	Limited Quantity:	≤1L
<b>IATA:</b>	UN Number:	UN1950
	Proper Shipping Name:	Aerosols
	Hazard Class:	2.1
	Packing Group:	None
<b>IMDG:</b>	UN Number:	UN1950
	Proper Shipping Name:	Aerosols
	Hazard Class:	2.1
	Packing Group:	None
	Limited Quantity:	≤1L
	Marine Pollutant:	Yes (Permethrin)

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## Section 15 - REGULATORY INFORMATION

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### US EPA Label Information:

**EPA Pesticide Registration Number** 9688-141-8845

#### **Federal Insecticide, Fungicide, Rodenticide Act Regulations**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subjected to certain labeling requirements under the federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

#### **EPA Pesticide Label**

**CAUTION:** KEEP OUT OF REACH OF CHILDREN.

Hazards to Humans and Domestic Animals

**CAUTION:** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside and wash clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**FIRST AID: If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a Poison Control Center or doctor for treatment advice. **If Swallowed:** Immediately call a Poison Control Center or doctor. Do not induce vomiting unless told to do so by a Poison Control Center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person. Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment. You may also contact 1-800-917-5438 for emergency medical treatment information. **NOTE TO PHYSICIAN:** Contains petroleum distillate – vomiting may cause aspiration pneumonia.

**ENVIRONMENTAL HAZARDS:** This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Do not apply directly to or near water. Drift and runoff may be hazardous to fish in water adjacent to treated areas. See Directions for Use for additional precautions and requirements. This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

**PHYSICAL OR CHEMICAL HAZARDS: FLAMMABLE.** Contents under pressure. Keep away from fire, sparks and heated surfaces. Do not puncture or incinerate. Exposure to temperatures above 130°F may cause bursting.

**STORAGE AND DISPOSAL:** Do not contaminate water, food, or feed by storage or disposal.

**Pesticide Storage:** Store in cool, dry area away from heat or open flame. **Pesticide**

**Disposal and Container Handling:** Do Not Puncture or Incinerate! **If empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions.

**EPA TSCA Inventory:**

All of the components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

**SARA Hazard Category  
(311/312):**

See OSHA hazards listed in section 2.

**SARA 313:**

Section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does contain chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	CAS #	Threshold Value %
Piperonyl Butoxide	51-03-6	1.0
Permethrin	52645-53-1	1.0
Tetramethrin	7696-12-0	1.0

**Disclaimer:**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

**Section 16 - OTHER INFORMATION**

Issue date: July 15, 2019  
Revision date: December 12, 2019  
Version number: 1.1



# SAFETY DATA SHEET

## Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)

### 1. IDENTIFICATION

<b>Product Name</b>	Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)
<b>Other Names</b>	Multi-Purpose, Ammonium Phosphate, Monoammonium Phosphate
<b>Recommended use of the chemical and restrictions on use</b>	
<b>Identified uses</b>	Fire Extinguishing Agent
<b>Restrictions on use</b>	Consult applicable fire protection codes
<b>Company Identification</b>	Badger Fire Protection 8767 Seminole Trail, Suite 202 Ruckersville, VA 22968 USA (434)-964-3200
<b>Customer Information Number</b>	
<b>Emergency Telephone Number</b>	
<b>CHEMTREC Number</b>	(800) 424-9300 (703) 527-3887 (International)
<b>Issue Date</b>	December 10, 2019
<b>Supersedes Date</b>	August 27, 2019

*Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, the Canadian Hazardous Products Regulations (HPR) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)*

### 2. HAZARD IDENTIFICATION

This SDS covers the product listed above as sold in pressurized and non-pressurized containers. GHS classifications for both forms are listed below.

#### GHS Classification – Pressurized

##### **Hazard Classification**

Gas under pressure – Compressed gas

##### **Label Elements**

Hazard Symbols



Signal Word: Warning

##### **Hazard Statements**

Contents under pressure; may explode if heated.



# SAFETY DATA SHEET

## Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)

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## 2. HAZARD IDENTIFICATION

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### Precautionary Statements

#### Prevention

None

#### Response

None

#### Storage

Protect from sunlight.

Store in well-ventilated place.

#### Disposal

None

### GHS Classification: Non - pressurized

### Hazard Classification

This product is classified as not hazardous in accordance with the Globally Harmonized System of Classification and Labelling (GHS).

### Label Elements

Hazard Symbols

None

Signal Word: None

### Hazard Statements

None

### Precautionary Statements

#### Prevention

None

#### Response

None

#### Storage

None

#### Disposal

None

### Other Hazards

This product may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC found limited evidence for pulmonary carcinogenicity of crystalline silica in humans.

### Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity < 10%

Acute dermal toxicity < 10%

Acute inhalation toxicity < 10%

Acute aquatic toxicity < 10%



# SAFETY DATA SHEET

## Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration*
Calcium Carbonate	471-34-1	10 – 30%
Mica	12001-26-2	0.5 – 1.5%
Kaolin Clay	1332-58-7	0.5 – 1.5%
<b>Non-hazardous ingredients</b>		
Monoammonium Phosphate	7722-76-1	45 – 70%
Ammonium Sulfate	7783-20-2	10 – 30%

**Note:** Pressurized product uses nitrogen or compressed air as the expellant.

\*Exact concentration withheld as trade secret.

### 4. FIRST- AID MEASURES

#### Description of necessary first-aid measures

##### Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

##### Skin

Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.

##### Ingestion

Dilute by drinking large quantities of water and obtain medical attention.

##### Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

#### Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

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

##### Notes to Physicians

Treat symptomatically.

### 5. FIRE - FIGHTING MEASURES

#### Suitable Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a fire. Use extinguishing agent appropriate to other materials involved. Keep pressurized containers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

#### Specific hazards arising from the chemical

Pressurized containers may explode in heat of fire.

#### Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.





# SAFETY DATA SHEET

## Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)

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### 6. ACCIDENTAL RELEASE MEASURES

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

Wear appropriate protective clothing. Prevent skin and eye contact. Remove leaking container to a safe place. Ventilate the area.

#### **Environmental Precautions**

Prevent large quantities of the material from entering drains or watercourses.

#### **Methods and materials for containment and cleaning up**

Sweep up or vacuum and transfer into suitable containers for recovery or disposal.

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### 7. HANDLING AND STORAGE

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#### **Precautions for safe handling**

Wear appropriate protective clothing. Prevent skin and eye contact.

#### **Conditions for safe storage**

Pressurized containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll pressurized containers. Do not drop pressurized containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the pressurized or plastic container. Store pressurized and plastic containers away from high heat sources. Storage area should be:  
- cool - dry - well ventilated - under cover - out of direct sunlight

---

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### **Control parameters**

Exposure limits are listed below, if they exist.

#### **Calcium Carbonate**

OSHA PEL: 15 mg/m<sup>3</sup> TWA, total dust  
5 mg/m<sup>3</sup> TWA, respirable fraction

#### **Mica**

ACGIH TLV: 3 mg/m<sup>3</sup> TWA, measured as respirable fraction of the aerosol.  
OSHA PEL: 20 mppcf, <1% crystalline silica

#### **Kaolin**

ACGIH TLV: 2 mg/m<sup>3</sup> TWA, for particulate matter containing no asbestos and <1% Crystalline silica  
OSHA PEL: 15 mg/m<sup>3</sup> TWA, total dust  
5 mg/m<sup>3</sup> TWA, respirable fraction

#### **Particulates not otherwise classified /regulated**

OSHA PEL: 50 mppcf or 15 mg/m<sup>3</sup> TWA, total dust  
15 mppcf or 5 mg/m<sup>3</sup> TWA, respirable fraction

#### **Appropriate engineering controls**

Use with adequate ventilation. If this product is used in a pressurized system, there should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.



# SAFETY DATA SHEET

## Commercial ABC Dry Chemical

### (Fire Extinguishing Agent, Pressurized and Non-pressurized)

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Individual protection measures

##### Respiratory Protection

Not normally required. Use dust mask where dustiness is prevalent, or TLV is exceeded. In oxygen deficient atmospheres, use a self contained breathing apparatus, as an air purifying respirator will not provide protection.

##### Skin Protection

Gloves

##### Eye/Face Protection

Chemical goggles or safety glasses with side shields.

##### Body Protection

Normal work wear.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

##### Non- Pressurized

##### Appearance

Physical State	Color
Solid (powder)	Pale Yellow

##### Odor

Odorless

##### Odor Threshold

No data available

##### pH

Not applicable

##### Specific Gravity

No data available

##### Boiling Range/Point (°C/F)

Not applicable

##### Melting Point (°C/F)

No data available

##### Flash Point (PMCC) (°C/F)

Not flammable

##### Vapor Pressure

No data available

##### Evaporation Rate (BuAc=1)

No data available

##### Solubility in Water

No data available

##### Vapor Density (Air = 1)

Not applicable

##### VOC (g/l)

None

##### VOC (%)

None

##### Partition coefficient (n-octanol/water)

No data available

##### Viscosity

No data available

##### Auto-ignition Temperature

No data available

##### Decomposition Temperature

No data available

##### Upper explosive limit

No data available

##### Lower explosive limit

No data available

##### Flammability (solid, gas)

No data available

##### Expellant - Nitrogen

##### Appearance

Physical State	Color
Compressed gas	Colorless

##### Odor

None

##### Odor Threshold

No data available

##### pH

Not applicable

##### Specific Gravity

0.075 lb/ft<sup>3</sup> @ 70°F as vapor

##### Boiling Range/Point (°C/F)

-196°C/-321 °F

##### Melting Point (°C/F)

-210°C/-346°F

##### Flash Point (PMCC) (°C/F)

Not flammable



# SAFETY DATA SHEET

## Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)

---

### 9. PHYSICAL AND CHEMICAL PROPERTIES

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Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	Not applicable
Solubility in Water	0.02 g/L
Vapor Density (Air = 1)	0.97
VOC (g/l)	Not applicable
VOC (%)	Not applicable
Partition coefficient (n-octanol/water)	No data available
Viscosity	Not applicable
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	Not explosive
Lower explosive limit	Not explosive
Flammability (solid, gas)	Not flammable

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### 10. STABILITY AND REACTIVITY

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#### Reactivity

Pressurized containers may rupture or explode if exposed to heat.

#### Chemical Stability

Stable under normal conditions.

#### Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### Conditions to Avoid

Exposure to direct sunlight - contact with incompatible materials

#### Incompatible Materials

Strong oxidizing agents - strong acids - sodium hypochlorite

#### Hazardous Decomposition Products

Oxides of carbon - ammonia - oxides of phosphorus - nitrogen oxides

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### 11. TOXICOLOGICAL INFORMATION

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#### Acute Toxicity

##### Mica:

Oral LD50 (Rat) >2000 mg/kg

##### Kaolin (clay):

Oral LD50 (Rat) >5000 mg/kg

Dermal LD50 (Rabbit) >5000mg/kg

##### Nitrogen

Simple asphyxiant

#### Specific Target Organ Toxicity (STOT) – single exposure

Nitrogen: Exposure to nitrogen gas at high concentrations can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations can cause dizziness, shortness of breath, unconsciousness or asphyxiation.



# **SAFETY DATA SHEET**

## **Commercial ABC Dry Chemical**

### **(Fire Extinguishing Agent, Pressurized and Non-pressurized)**

---

#### **11. TOXICOLOGICAL INFORMATION**

---

##### **Specific Target Organ Toxicity (STOT) – repeat exposure**

No relevant studies identified.

##### **Serious Eye damage/Irritation**

Mica: Not irritating (rabbit)

##### **Skin Corrosion/Irritation**

Mica: Not irritating (rabbit)

##### **Respiratory or Skin Sensitization**

No relevant studies identified.

##### **Carcinogenicity**

This product may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC has classified Silica Dust, Crystalline, in the form of quartz or cristobalite as 1 (carcinogenic to humans).

##### **Germ Cell Mutagenicity**

No relevant studies identified.

##### **Reproductive Toxicity**

No relevant studies identified.

##### **Aspiration Hazard**

Not an aspiration hazard.

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#### **12. ECOLOGICAL INFORMATION**

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##### **Ecotoxicity**

No relevant studies identified.

##### **Mobility in soil**

No relevant studies identified.

##### **Persistence/Degradability**

No relevant studies identified.

##### **Bioaccumulative Potential**

No relevant studies identified.

##### **Other adverse effects**

No relevant studies identified.

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#### **13. DISPOSAL CONSIDERATIONS**

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##### **Disposal Methods**

Dispose of container in accordance with all applicable local and national regulations.



# **SAFETY DATA SHEET**

## **Commercial ABC Dry Chemical**

### **(Fire Extinguishing Agent, Pressurized and Non-pressurized)**

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#### **14. TRANSPORT INFORMATION**

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Safety Data Sheet information is intended to address a specific material and not various forms or states of containment.

Special Precautions for Shipping:

Individuals must be certified as Hazardous Material Shipper for all transportation modes.

Pressurized Fire Extinguishers are considered a hazardous material by the US Department of Transportation and Transport Canada.

<b>DOT CFR 172.101 Data</b>	Fire extinguishers, 2.2, UN1044
<b>UN Proper Shipping Name</b>	Fire extinguishers
<b>UN Class</b>	(2.2)
<b>UN Number</b>	UN1044
<b>UN Packaging Group</b>	Not applicable
<b>Classification for AIR Transportation (IATA)</b>	Consult current IATA Regulations prior to shipping by air.
<b>Classification for Water Transport IMDG</b>	Consult current IMDG Regulations prior to shipping by water.

When shipping via ground, portable fire extinguishers pressurized to less than 241 psi and of less than 1100 cubic inches in size meet the requirements of "Limited Quantity" as referenced in 49 CFR 173.309 (2010). There is no limited quantity designation for fire extinguishers when shipped by air or water.

This section is believed to be accurate at the time of preparation. It is not intended to be a complete statement or summary of the applicable laws, rules, or hazardous material regulations, and is subject to change. Users have the responsibility to confirm compliance with all laws, rules, and hazardous material regulations in effect at the time of shipping.

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#### **15. REGULATORY INFORMATION**

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**United States TSCA Inventory**

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

**Canada DSL Inventory**

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

**SARA Title III Sect. 311/312 Categorization: Pressurized**

Gas under pressure

**SARA Title III Sect. 311/312 Categorization: Non-pressurized**

None

**SARA Title III Sect. 313**

This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.



# **SAFETY DATA SHEET**

## **Commercial ABC Dry Chemical**

### **(Fire Extinguishing Agent, Pressurized and Non-pressurized)**

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#### **16. OTHER INFORMATION**

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##### **NFPA Ratings**

NFPA Code for Health - 1

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

##### **Legend**

ACGIH: American Conference of Governmental Industrial Hygienists

CAS#: Chemical Abstracts Service Number

EC50: Effect Concentration 50%

IARC: International Agency for Research on Cancer

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

N/A: Denotes no applicable information found or available

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Revision Date: December 10, 2019

Replaces: August 27, 2019

Changes made: Update to Sections 3, 8 and 9.

##### **Information Source and References**

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

##### **Prepared By:**

EnviroNet LLC.

The information and recommendations presented in this SDS are based on sources believed to be accurate. Badger Fire Protection assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.

<b>IRWIN Chalk – Orange</b>	<b>December 23, 2016</b>
	<b>Revision 2</b>

**1. PRODUCT and COMPANY IDENTIFICATION**

Commercial Product Name: IRWIN Chalk – Orange

Company: IRWIN Tools

Use of product: Snap line, mark

Emergency contact: 1-800-464-7946 8:00am-5:00pm Monday-Friday

**2. HAZARDS IDENTIFICATION****Hazards Identification: GHS Classification and Hazard Statement****Carcinogenicity** – May cause cancer (lung) Category 1A, H350**Signal Word: DANGER****Precautionary Statements**

P201 Obtain special instructions before use.

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

P280 Wear protective gloves and eye protection.

P308 and P313 If exposed or concerned, get medical advice/attention.

P405 Store locked up.

**Hazards Not Otherwise Classified or Not Covered by GHS:****Eye:** May cause irritation. Chalk dust is discomforting and abrasive to the eyes.**Skin:** Prolonged skin contact may cause irritation. When the product is used as intended, it is unlikely to cause discomfort.**Ingestion:** Ingestion of large amounts may cause gastrointestinal irritation. Ingestion is considered an unlikely route of entry in commercial or industrial environments.**Inhalation:** May cause respiratory tract irritation. When the product is used as intended, it is unlikely to cause discomfort.**Chronic:** Repeated and prolonged inhalation exposure to crystalline silica dust above exposure limits may cause delayed, chronic lung injury (silicosis). When the product is used as intended, dust levels should not exceed exposure limits. See Sections 8 and 11.**DANGER****Hazard Ratings:****Hazardous Material Identification System (HMIS):**

Health 2\*, Flammability 0, Reactivity 0 \*chronic effects

**National Fire Protection Association (NFPA):**

Health 2, Flammability 0, Reactivity 0

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance name	Value (%)	CAS No.	EC No.
Calcium carbonate	85 - 90	471-34-1	207-439-9
Fluorescent orange	10 - 15	1719-72-8	none
Silica (crystalline quartz) <sup>1</sup>	0.1 - 1	14808-60-7	238-878-4

<sup>1</sup> Calcium carbonate may contain crystalline silica at levels between 0.1 and 1.0 % and varies naturally.

# SAFETY DATA SHEET

IRWIN Chalk – Fluorescent Orange

## 4. FIRST AID MEASURES

**Inhalation:** Remove from exposure and move to fresh air immediately. Encourage the patient to blow nose to ensure clear breathing passages. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**Skin contact:** Wet clothing first to minimize dust generation, then; remove contaminated clothing and shoes. Launder contaminated clothing before wearing again. Wash affected area with water (and soap if available) Get medical aid in the event of irritation.

**Eye contact:** Do not rub eyes, rubbing may cause abrasions. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Ingestion:** Wash mouth out with plenty of water. Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical aid.

**Additional advice:** Show this safety data sheet to the doctor in attendance

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Substance is noncombustible.

**Explosion:** No information found.

**Specific hazards:** Not considered to be a significant fire risk, however; the containers may burn, releasing carbon monoxide, and carbon dioxide.

**Special protective equipment for Firefighters:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Wear appropriate personal protective equipment as specified in Section 8.

**Environmental precautions:** Do not allow this material to be released to the environment without proper governmental permits.

**Methods for cleaning up:** Recover the product whenever possible. Avoid generating dust when sweeping/shoveling up. If required, wet the material with water to prevent creating dust. Pick up and place in a suitable container for reclamation or disposal. Follow applicable OSHA regulations (29 CFR 1910.120)

## 7. HANDLING AND STORAGE

**Storage:** Store this product in a tightly-closed container in a dry, well-ventilated area away from incompatible substances.

**Handling:** Avoid creating, or breathing dust. Practice good personal hygiene, (hand washing, etc.) after using this product. Avoid contact with skin and eyes.

**Packaging material:** No information found.



# SAFETY DATA SHEET

IRWIN Chalk – Fluorescent Orange

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Component	CAS No.	% by weight	Exposure Limit 8-Hour TWA <sup>1</sup> (mg/m <sup>3</sup> )		
			OSHA PEL	ACGIH TLV	NIOSH REL
Calcium Carbonate (Limestone)	471-34-1; (1317-65-3)	85-90	15 <sup>2</sup> 5 <sup>3</sup>	10 <sup>2</sup>	10 <sup>2</sup> 5 <sup>3</sup>
Fluorescent Orange	1719-72-8	10-15	Not Est.	Not Est.	Not Est.
Silica-Crystalline Quartz <sup>4</sup>	14808-60-7	0.1-1.0	0.05 <sup>3</sup>	0.025 <sup>3</sup>	0.05 <sup>3</sup>

<sup>1</sup> TWA = Time-weighted average

<sup>2</sup> Total dust.

<sup>3</sup> Respirable dust.

<sup>4</sup> Calcium carbonate may contain crystalline silica at levels between 0.1 and 1.0 % and varies naturally.

**Exposure and Engineering Controls:** Facilities storing or utilizing this material should have potable water available for washing eyes and skin. Use sufficient general area (or outdoor) ventilation. Local exhaust ventilation should be used if airborne concentrations of dust exceed limits cited in Section 8.

### Personal protective equipment:

**Hand protection:** Wear protective gloves

**Eye protection:** Wear safety glasses, or chemical goggles in windy conditions or where eye contact is possible.

**Respiratory protection:** When engineering controls are not sufficient to reduce exposure, seek professional advice prior to respirator selection and use. Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**Hygiene measures:** Wash contaminated clothing before reuse.

**Environmental exposure controls:** No information found.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder
Color:	Orange
Odor:	Odorless.
pH (at 10% solids):	No data available.
Boiling point/range:	No data available.
Melting point/range:	Decomposes
Flash point:	No data available.
Evaporation rate:	No data available.
Vapor density:	No data available.
Solubility in water:	<0.0002 (Trace)
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Vapor pressure:	No data available.
Relative density (H <sub>2</sub> O=1):	2.60-2.65
Viscosity:	No data available.
Partition coefficient (n-octanol/water):	No data available.

# SAFETY DATA SHEET

IRWIN Chalk – Fluorescent Orange

## 10. STABILITY AND REACTIVITY

**Stability:** Stable under normal temperatures and pressures.

**Hazardous decomposition products:** Carbon monoxide, carbon dioxide, calcium oxide.

**Materials to avoid:** Strong oxidizing agents, acids, aluminum, fluorine, magnesium

**Conditions to avoid:** Incompatible materials, moisture.

**Hazardous Polymerization:** Does not occur.

## 11. TOXICOLOGICAL INFORMATION

Note: Toxicological effects described in this section are those that would be expected based on data from the components of this product.

**Acute toxicity:** Calcium carbonate (CAS# 471-34-1): Draize test, rabbit, eye: 750 ug/24H Severe; Draize test, rabbit, skin: 500 mg/24H Moderate; Oral, rat: LD50 = 6,450mg/kg.

**Inhalation:** (Silica, crystalline quartz) Human: LC<sub>Lo</sub>: 300 µg/m<sup>3</sup>/ intermittent exposure over a 10-year period produced pulmonary system effects.

**Skin contact:** (Calcium carbonate) Rabbit: 500mg administered for 24 hours produces moderate skin irritation.

**Eye contact:** (Calcium carbonate) Rabbit: 0.750 mg administered for 24 hours produced severe irritation.

**Ingestion:** (Calcium carbonate) Rat: LD<sub>50</sub>: 6,450 mg/kg.

**Chronic toxicity/Carcinogenicity:** Repeated and prolonged inhalation exposure to crystalline silica dust above exposure limits may cause delayed, chronic lung injury (silicosis). When the product is used as intended, dust levels should not exceed exposure limits.

Quartz – crystalline silica:

The International Agency for Research on Cancer (IARC) has designated this substance Group 1, "carcinogenic to humans".

The National Toxicology Program (NTP) has designated this substance: Group K "known to be a human carcinogen"

American Conference of Governmental Industrial Hygienists (ACGIH) has designated this substance A2; suspected human carcinogen. The agent is carcinogenic in experimental animals at dose levels, by route of administration, at sites of histologic type(s) or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

## 12. ECOLOGICAL INFORMATION

Bioaccumulation: No information found.

Ecotoxicity effects: No information found.

Limestone (which is primarily composed of calcium carbonate) is not classified as a "Toxic pollutant" or a "hazardous substance under Section 307 and 311 of the United States Clean Water Act.

## 13. DISPOSAL CONSIDERATIONS

Waste from residues of this product is not a hazardous waste according to U.S. Environmental Protection Agency (EPA) regulations. Disposal by landfill may be acceptable.

Consult an expert on the disposal of recovered material for compliance with state, provincial, and/or local regulations.

# SAFETY DATA SHEET

IRWIN Chalk – Fluorescent Orange

## 14. TRANSPORT INFORMATION

**U.S. DOT:** Not regulated

**ADR/RID:** Not regulated

**IMDG:** Not regulated

**ICAO/IATA:** Not regulated

## 15. REGULATORY INFORMATION

### U.S. Federal Regulations

**OSHA:** Ingredients are listed as air contaminants (29 CFR 1910.1000).

Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**TSCA** (Toxic Substance Control Act): All components of this product are listed on the TSCA inventory.

**CERCLA:** Hazardous Substance, (40 CFR 302.4): Not Listed.  
Extremely Hazardous Substance (40 CFR 355): Not Listed.

**SARA Hazard Category:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following category:

"An immediate (acute) and chronic health hazard."

Chemicals subject to the reporting requirements of Section 313 or Title III of SARA and 40 CFR Part 372: None.

### STATE REGULATIONS:

#### California's "Safe Drinking Water and Toxic Enforcement Act of 1986" (Proposition 65)

This product contains the following Proposition 65 regulated materials known to the State of California to cause cancer or reproductive harm. The listed typical amounts are a result of their natural presence in the raw materials from which this product is produced.

Silica-crystalline quartz	equal to, or less than 1.0 percent
---------------------------	------------------------------------

**CANADA WHIMS:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the SDS contains all of the information required by the CPR.

## 16. OTHER INFORMATION

The contents and format of this SDS are in accordance with the U.S. Hazard Communication Standard 29 CFR 1910.1200; the Canadian CPR, and Workplace Hazardous Materials Information System (WHMIS); and EEC Commission Directive 1999/45/EC, and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

# SAFETY DATA SHEET

IRWIN Chalk – Fluorescent Orange

**DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

End of document



Revised on 10/02/2022

## Safety Data Sheet

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### 1 IDENTIFICATION

#### Product identifier

**Trade name:** Lead Solder

**Other means of identification:** Metal Alloy

30/70, 40/60, 50/50, 60/40, 63/37, 70/30, 90/10

Acid Core, Rosin Core

SDS 0128

#### Recommended use and restriction on use

**Recommended use:** Soldering

**Restrictions on use:** No further relevant information available.

#### Manufacturer/Importer/Supplier/Distributor information

##### Importer:

Harris Products Group

14 Queensland Rd

Darra, QLD, Australia 4076

(07) 33753670

**Safety Data Sheet Questions:** [sales@hgea.com.au](mailto:sales@hgea.com.au)

**Website:** <http://www.harrisproductsgroup.com.au>

**Poisons Information Centre/Helpline (24 hours) Australia 13 11 26**

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### 2 HAZARD(S) IDENTIFICATION

#### GHS classification of the substance/mixture.

Classified according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

#### Classification of the substance or mixture

The product is classified as hazardous according to the Globally Harmonized System (GHS)

**EMERGENCY OVERVIEW:** These products consist of odourless, lead/tin alloy wires, which have a metallic lustre and may have a flux core. There are no immediate health hazards associated with these products, as wires. When heated during soldering operations, these products may generate irritating and toxic fumes of lead oxide, tin oxides, hydrogen chloride, zinc oxides, and ammonium compounds. There is a danger of cumulative effects if fumes or dusts from these products are inhaled or ingested. Contact with the rosin core of these wires can result in allergic reaction and sensitization to the skin in susceptible persons. These products are not reactive. If involved in a fire, these products may generate irritating fumes and a variety of metal oxides, as described above. Finely divided dusts of these products may result in explosive air/dust mixtures. Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

**INHALATION:** Inhalation of large amounts of particulates generated by these products during soldering operations may be physically irritating and cause deposits of dust in nasal passages. Due to the presence of lead, inhalation of fumes or dusts from these products can result in lead poisoning. Symptoms of poisoning include headache, fatigue, nausea, metallic taste in the mouth, abdominal cramps, joint pain, metallic taste in the mouth, vomiting, constipation, bloody diarrhea, and harmful effects on the central nervous system. Exposure to lead can cause significant cumulative toxic effects, effects on the reproductive system and may cause cancer. See information under "Other Health Effects" for additional information. When heated to

decomposition, the rosin core of some of these products can include toxic compounds, including formaldehyde, acetaldehyde, or malonaldehyde. Inhalation of these fumes can result in irritation to the respiratory system.

**SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE:** During soldering operations, the most significant route of over-exposure is via inhalation of fumes.

**GHS Classification(s)** Toxic to Reproduction: Category 1A  
Acute Toxicity: Oral/Inhalation: Category 4  
Skin Corrosion/Irritation: Category 1

**Label elements**

**Signal word** **Danger**

**Hazard pictograms**



**Hazard Statement(s)**

**H302** Harmful if swallowed  
**H360** May damage fertility or the unborn child.  
**H317** May cause an allergic skin reaction  
**H373** May cause damage to organs through prolonged exposure  
**H302+H332** Harmful if swallowed or inhaled  
**H314** Causes severe skin burns and eye damage  
**H411** Toxic to aquatic life with long lasting effects

**Prevention Statement(s):**

**P260** Do not breathe dust/fume/gas/mist/vapours/spray.  
**P261** Avoid breathing dust/fumes/gas/mist/vapours/sprays  
**P280** Wear protective gloves/protective clothing/eye protection/face protection.  
**P264** Wash thoroughly after handling.  
**P270** Do not eat, drink or smoke when using this product.  
**P201** Obtain special instructions before use  
**P202** Do not handle until all safety precautions have been read and understood.  
**P260** Do not breathe dust/fume/gas/mist/vapours/spray.  
**P202** Do not handle until all safety precautions have been read and understood.

**Response statement(s):**

**P301+P312** If swallowed: Call a poison centre or doctor  
**P304 + P340** **INHALED:** Remove to fresh air and keep at rest in a position comfortable  
**P308 + P313.** IF exposed or concerned: Get medical advice/ attention  
**P314** Get medical attention if you feel unwell  
**P330** Rinse mouth  
**P302 + P352.** If on skin: wash with plenty of soap and water

**Storage Statement(s):**

**P405** Store Locked Up

**Disposal Statement(s):**

**P501** Dispose of contents/container in accordance with relevant regulations.

**Other Hazards** No information provided

**Additional information:****Other hazards which do not result in GHS classification:**

Heat rays (infrared radiation) from flame or hot metal can injure eyes. Overexposure to brazing fumes and gases can be hazardous. Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using this product.

**Hazard description:**

**WHMIS-symbols:** Not hazardous under WHMIS.

**Additional information:****Other hazards which do not result in GHS classification:**

Heat rays (infrared radiation) from flame or hot metal can injure eyes. Overexposure to brazing fumes and gases can be hazardous. Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using this product.

### 3 Composition/information on ingredients

**Chemical characterization: Mixtures**

**Description:** Mixture: consisting of the following components.

NOMINAL COMPOSTION WEIGHT % Wire							
TRADE NAME	30/70	40/60	50/50	60/40	63/37	70/30	90/10
Tin (Sn)	30%	40%	50%	60%	63%	70%	90%
Lead (Pb)	70%	6%	50%	40%	37%	30%	10%

NOMINAL COMPOSTION WEIGHT % Flux Core				
TRADE NAME	Activate Rosin CAS# 8050-09-7	Ammonium Chloride CAS# 12125-02-9	Zinc Chloride CAS# 7646-85-7	Water CAS#
ACID CORE		<20%	<70%	Balance
ROSIN CORE	100%			

**Additional information:**

For the listed ingredient(s), the identity and exact percentage(s) are being withheld as a trade secret.

**Composition comments:**

The term "Dangerous Components" should be interpreted as a term defined in Hazard Communication standards and does not necessarily imply the existence of a hazard. The product may contain additional nonhazardous ingredients or may form additional compounds under the condition of use. Refer to Sections 2 and 8 for more information.

### 4 First-aid measures

**Description of first aid measures**

**General information:** Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and SDS to health professional with victim.

**Inhalation:**

If fumes generated by soldering operations involving these products are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions.

**Skin contact:**

If fumes generated by soldering operations involving these products contaminate the skin, begin decontamination with running water. If molten material contaminates the skin, immediately begin decontamination with cold, running water. Minimum flushing is for 15 minutes. Victim must seek medical attention if any adverse reaction occurs.

**Eye contact:**

If fumes generated by soldering operations involving these products enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek immediate medical attention.

**Ingestion:**

For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

**Information for doctor:** Treat Symptomatically

**Medical conditions aggravated by exposure:** Skin, respiratory, blood, central nervous system and peripheral system, and kidney disorders, may be aggravated by prolonged over-exposures to the dusts or fumes generated by these products.

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

See Section 11 for more detailed information on health effects and symptoms.

**Danger**

Brazing hazards are complex and may include physical and health hazards such as but not limited to infrared radiation from flame or hot metal, physical strains, thermal burns due to hot metal or spatter and potential health effects of overexposure to brazing fume or dust. Refer to Section 11 for more information.

## 5 Fire-fighting measures

**Extinguishing media**

Use an extinguishing agent suitable for the surrounding fire.

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

Non flammable. May evolve toxic gases/ fumes (metal oxides, borates, fluorides, boron oxides) during brazing, soldering or fluxing operations.

**Advice for firefighters**

Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

**Unusual fire and explosion hazards:** When involved in a fire, these products may decompose and produce lead oxide, tin oxides, hydrogen chloride, zinc oxides, and ammonium compounds. The hot material can present a significant thermal hazard to firefighters.

**Special fire-fighting procedures:** Lead and its decomposition products are hazardous to health. Fire-fighters should not enter an area in which a fire involves these products without wearing specialized protective equipment suitable for potential Lead exposure. Normal fire-fighter bunker gear is not adequate to protect against exposure to Lead and its decomposition products. A full-body, encapsulating chemical resistant suit with positive-pressure Self-Contained Breathing Apparatus may be necessary.

**Additional information**

Read and understand the Work Safe Australia Code of Practice on Welding Processes and "Standard for Fire Prevention During Welding, Cutting and Other Hot Work" before using this product. Section 274 of the Work Health and Safety Act (the WHS Act.)



## 6 Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel. If airborne dust and/or fume is present, use adequate engineering controls and, if needed, personal protection to prevent overexposure. Refer to recommendations in Section 8.

Incidental releases of this product can be cleaned up by personnel wearing gloves and goggles (or safety glasses). In the event of a non-incidental release, minimum Personal Protective Equipment should be Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard-hat, and self-contained Breathing Apparatus. Pick up paste with polypad or other absorbent agent. Rinse area with a soap and water solution. Decontaminate the area thoroughly. Place all spilled residues in a suitable container and seal. Dispose of in accordance with State, and local hazardous waste disposal regulations

### Environmental precautions:

Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

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

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Dispose contaminated material as waste according to item 13.

### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

### Handling:

#### Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

Read and understand the manufacturer's instruction and the precautionary label on the product. See the Australian Standard - AS 1674.1 – 1997 – Reconfirmed 2016. Safety in Welding and Allied Processes Australia. As with all chemicals, avoid getting these products ON YOU or IN YOU. Wash thoroughly after handling these products. Do not eat or drink while handling these products. Use ventilation and other engineering controls to minimize potential exposure to these products. If dusts or fumes of these products are present, use of a suitable NIOSH approved respirator must commence immediately to protect against possible Lead poisoning. Unprotected workers must avoid all contact with these products.

### Conditions for safe storage, including any incompatibilities

#### Storage:

Store in a cool, dry, well ventilated area, removed from incompatible substances and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.

All employees who handle these products should be trained to handle it safely. Use in clearly posted areas(s) indicating Lead hazard. Access doors must remain closed while these products are being used or stored.

When handling Lead powder on a large scale, closed-handling systems for processes should be used. If this is not possible, use in the smallest possible amounts in appropriate labelled, containment devices (e.g. fume hood). Containment devices should be made of smooth, unbreakable compatible material. Maintain containment devices at appropriate air-flow and negative pressure. Check regularly. Use in a well-ventilated location. Avoid the generation of dusts and prevent the release of fumes to the workplace. Avoid breathing fumes of these products generated during soldering operations. Open containers on a stable surface. Cover

surfaces in which these products are being used with compatible, chemical resistant and/or disposable material for easier containment and clean-up. Good housekeeping is very important. Keep work areas clean. Packages of these products must be properly labelled.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical systems:** No further data; see item 7.

### Control parameters

#### Exposure Guidelines:

Refer to the Safe Environments risk management document – Welding Fume -

<http://www.safeenvironments.com.au/welding-fume/> The exposure standard refers to the publication by Work Safe Australia “Workplace Exposure Standard for Airborne Contaminants” with the Date of Effect being 22 December 2011. Work Safe Australia note that “exposure standards do not represent a fine dividing line between a healthy and unhealthy work environment. Natural biological variation and the range of individual susceptibilities mean that a small number of people might experience adverse health effects below the exposure standard.

Exposure Standards					
CAS	Ingredient	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>
7440-31-5	Tin (Sn)		2		
7439-92-1	Lead (Pb)		.15		
8050-09-7	Activate Rosin		.1		
7646-85-7	Zinc Chloride		1		
12125-02-9	Ammonium Chloride Fume		10		20

Reference: ACGIH Biological Exposure Indices

Refer to Worksafe Australia for standards:

[http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/639/Workplace\\_Exposure\\_Standards\\_for\\_Airborne\\_Contaminants.pdf](http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/639/Workplace_Exposure_Standards_for_Airborne_Contaminants.pdf)

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Do not eat, drink or smoke when using the product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Determine the composition and quantity of fumes and gases to which workers are exposed by taking an air sample from inside the welder's helmet if worn or in the worker's breathing zone. Improve ventilation if exposures are not below limits. Personal air monitoring is generally undertaken over a representative period of time undertaken to Australian Standard AS 3640-2009 Workplace atmospheres – Method for sampling and gravimetric determination of inhalable dust using IOM sampling heads with flow rate of 2.0 L/min. Keep away from foodstuffs, beverages and feed.

**Engineering controls:** No further relevant information available.

#### Ventilation

Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

#### Breathing equipment:

Where an inhalation risk exists, wear a Class P2 (Metal fume) respirator. If using product in a confined area, wear an Air-line respirator.

**Protection of hands:**

Leather or welding gloves.

Suitable gloves can be recommended by the glove supplier.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

**Eye protection:**

Wear glasses or face shield with appropriate shading for brazing operations.

(Continued on page 6)

**Body protection:** Protective work clothing

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

**APPEARANCE AND COLOR:** These odourless products consist of Tin/Lead or a Tin/Lead/Zinc alloy with a metallic lust and the Pasteweld in a paste mixture.

#### General Information for LEAD: a possible main component:

Odour		Flammability	Not Determined
Odour Threshold	Not Applicable	Flash Point	Not Available
pH	Not Applicable	Auto Igniting	Not Available
Melting point/range	183 C° – 185 C°	Solubility water	Insoluble
Vapour Pressure, mmHg@980°C	1	Flash Point	Non Combustible
Relative Vapour Density	7.14 (Air = 1)	Density at 20°C (68°F)	Not Applicable
Boiling Point & boiling range	1740°C	Evaporation Rate	Not Applicable
Freezing/Melting Point	327.4°C	Specific Gravity @200C (water = 1)	11.34

#### General Information for TIN: a possible main component:

Odour		Flammability	Not Determined
Odour Threshold	Not Applicable	Flash Point	Not Available
pH	Not Applicable	Auto Igniting	Not Available
Melting point/range	Not Applicable	Solubility water	Insoluble
Vapour Pressure, mmHg@980°C	0	Flash Point	Non Combustible
Relative Vapour Density	7.14 (Air = 1)	Density at 20°C (68°F)	Not Applicable
Boiling Point & boiling range	2270°C	Evaporation Rate	Not Applicable
Freezing/Melting Point	232°C	Specific Gravity @200C (water = 1)	7.28

## 10 Stability and reactivity

**STABILITY:** Normally stable. These products can oxidize rapidly to form an insoluble layer of basic Lead carbonate.

**DECOMPOSITION PRODUCTS:** Lead oxide, Tin oxides, hydrogen chloride, Zinc oxides, and ammonium compounds. **NOTE:** The composition and quality of soldering fumes and gases are dependent upon the metal being soldered, the process, the procedure, and the alloys used. Other conditions that could also influence the composition and quantity of fumes and gases to which workers may be exposed include the following: any coatings on metal being welded (e.g. paint, plating, or galvanizing), the number of work stations and the volume of the work area, the quality of ventilation, the position of the work stations with respect to the fume plume, and the presence of other contaminants in the atmosphere. When the alloy is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 2 (Composition and Information on Ingredients). Fume and gas decomposition products, and not the ingredients in the solders, are important. Concentration of the given fume or gas component may decrease or increase by many times the original concentration. New compounds may form. Decomposition products of normal operations include not only those originating from volatilization, reaction, or oxidation of the product's components but also those from base metals and any coating (as noted previously). The best method to determine the actual composition of generated fumes and gases is to take an air sample from the breathing zone. For additional information, refer to the American Welding Society Publication, "Fumes and Gases in the Welding Environment".

**MATERIALS WITH THESE PRODUCTS ARE INCOMPATIBLE:** These products will be attacked or can react with strong acids, strong bases, hydrogen peroxide (52% or greater- in presence of manganese dioxide), sodium azide, ammonium nitrate, sodium acetylides, sodium carbide, zirconium, or chlorine trifluoride. The flux of some of these products are incompatible with potassium, strong acids, alkalis, interhalogens, strong oxidizers, ammonium nitrate, hydrogen cyanide, potassium chlorate and Lead salts (not Lead metal) and silver salts.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Avoid uncontrolled exposure to extreme temperatures and incompatible materials.

## 11 Toxicological information

Toxicity				
CAS	Ingredient	Oral Toxicity LC50	Intravenous Toxicity LD50	Inhalation Toxicity LD50
7439-92-1	Lead	TCLo -450 mg/kg 6 years		
7646-85-7	Zinc Chloride	7950 mg/kg Mouse		
12125-02-9	Ammonium Chloride Fume	1300mg/kg Mouse	30 mg/kg Rat	

### Information on toxicological effects:

#### Acute toxicity:

Toxic if swallowed

#### Irritancy of product:

Dusts or fumes of these products may be irritating to contaminated skin and eyes. Fumes may be irritating to the respiratory system.

#### Sensitization:

There is some evidence that inhalation of fumes from the Ammonium Chloride component of some of these products may cause respiratory sensitization in susceptible individuals. Symptoms may include difficulty breathing, persistent coughing and wheezing. Contact with the paste flux can result in allergic reaction and skin sensitization in susceptible individuals.

#### Inhalation:

Short-term (acute) overexposure to brazing fumes may result in discomfort such as metal fume fever, dizziness, nausea, or dryness or irritation of nose, throat, or eyes. May aggravate pre-existing respiratory problems (e.g. asthma, emphysema). Long-term (chronic) overexposure to brazing fumes can lead to siderosis (iron deposits in lung), central nervous system effects, bronchitis and other pulmonary effects.

**Mutagenicity:**

These products are not reported to produce mutagenic effects in humans.

**Carcinogenicity:**

Welding fume is classified as possibly carcinogenic to humans (IARC Group 2B).

**Reproductive:**

These products are not reported to cause reproductive effects in humans; however, the Lead component of this product has produced embryo toxic effects in humans.

**STOT – single exposure:**

Over exposure to fumes may result in irritation of the nose and throat, nausea and headache.

**STOT – repeated exposure:**

Over exposure to fumes may result in irritation of the nose and throat, nausea and headache.

## 12 Ecological information

**ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.**

**Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.**

Ingredient	Result	Species	Exposure
7646-85-7 Zinc Chloride	LC50 0.4 – 2.2 mg/l	Fish	96 h
7646-85-7 Zinc Chloride	EC50 0.2mg/l	Daphnia magna	48 h
7646-85-7 Zinc Chloride	LOEC 12.5 mg/l	Algae	96 h
12125-02-9 Ammonium Chloride Fume	LC50 109 mg/l	Fish	48 h

**Ecotoxicity:** Acute

**Persistence and Degradability:** Components of these products will react with water and air to form a variety of stable metal oxides.

**Bioaccumulative Potential:** No data is available on the degradability of this product

**Mobility in soil:** No data is available on the degradability of this product

**Other adverse effects:** No data is available on the degradability of this product

## 13 Disposal considerations

**Waste treatment methods**

**Recommendation:**

Reuse where possible. Alternatively, absorb with sand or similar and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport Information

UN-Number DOT, ADR, ADN, IMDG, IATA	Not Regulated
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Not Regulated

Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	Not Regulated
Packing group DOT, ADR, IMDG, IATA	Not Regulated
Environmental hazards: Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Not regulated.

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## 15 Regulatory information

**Product Name:** Lead Solder

**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

**Poison Schedule:**

Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Classifications:**

Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Refer to the Australian Inventory of Chemical Substances – AICS at <https://www.nicnas.gov.au/chemicals-on-AICS#main>

**Poison schedule:** Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). <https://www.legislation.gov.au/Details/F2016L01638>

**Classifications:** Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

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## 16 Other information

### References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice

Standard for the Uniform Scheduling of Medicines and Poisons

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Modell Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants, Safe work, Australia

American Conference of Industrial Hygienists (ACGIH)

Globally Harmonised System of classification and labelling of chemicals.

**WELDING (1):** Due to the diversity of welding techniques, processes, materials used, nature of the surface being welded and the presence of contaminants, the fumes & gases associated with welding will vary in composition and quantity. When assessing a welding process, the toxic fumes generated may not only be associated with the parent metal, filler wire or electrode. The welding/cutting arc may generate nitrogen oxides, carbon monoxide & other gases, whilst UV radiation emitted from some arcs generates ozone. Ozone may irritate mucous membranes and cause pulmonary oedema & haemorrhage. Shielding gases (e.g. carbon dioxide and inert gases i.e. argon and helium) in high concentrations, in confined spaces, may reduce oxygen in the atmosphere to dangerous levels, resulting in possible asphyxiation.

**WELDING (2):** In addition to complying with individual exposure standards for specific contaminants, where current manual welding processes are used, the fume concentration inside the welder's helmet should not exceed 5 mg/m<sup>3</sup> ( unless otherwise classified) when collected in accordance with Australian Standard AS 3853.1: Fume from welding and allied processes - Guide to methods for the sampling and analysis of particulate matter and AS 3853.2: Fume from welding and allied processes - Guide to methods for the sampling and analysis of gases. Airway irritation and metal fume fever are the most common acute effects from welding fumes. Reported to cause reduced sperm quality in welders.

**WELDING (3):** Other gases and fumes associated with welding processes include: Inert shielding gases (e.g. argon, carbon dioxide, helium) which may reduce the atmospheric oxygen content in poorly ventilated areas. UV-radiation and Infra-Red radiation may decompose chlorinated degreasing agents to form highly toxic and irritating phosgene gas. This may occur if a metal has been degreased but inadequately dried or when vapours from a nearby degreasing bath enter the welding zone.

**WELDING (4):** Welding fumes may contain a wide variety of chemical contaminants, including oxides and salts of metals and other compounds which may be generated from electrodes, filler wire, flux materials and from the welded material (e.g. painted surfaces). Welding stainless-steel and its alloys generates nickel and chromium (VI) compounds. Welding fumes are retained in the lungs. Sparingly soluble compounds may be released slowly from the lungs. Welding fume is classified as possibly carcinogenic to humans (IARC Group 2B).

#### **PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

#### **Disclaimer:**

We urge each end user and recipient of this SDS to study it carefully. If necessary, consult an industrial hygienist or other expert to understand this information and safeguard the environment and protect workers from potential hazards associated with the handling or use of this product.

Harris Products Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for use, handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

#### **WARNING: PRODUCT COMPONENTS PRESENT HEALTH AND SAFETY HAZARDS. READ AND UNDERSTAND THIS MATERIAL SAFETY DATA SHEET (M.S.DS.). ALSO, FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.**

The information contained herein relates only to the specific product. If the product is combined with other materials, all component properties must be considered. **BE SURE TO CONSULT THE LATEST VERSION OF THE MSDS. MATERIAL SAFETY DATA SHEETS ARE AVAILABLE FROM HARRIS PRODUCTS GROUP** Harris Products Group, HGE PTY LTD, Brisbane | Melbourne | Perth | New Zealand, 14 Queensland Rd, Darra, QLD 4076, Phone: (07) 3375 3670 | Fax: (07) 3375 3620, Email: sales@hgea.com.au, www.harrisproductsgroup.com.au, **STATEMENT OF LIABILITY-DISCLAIMER**

To the best of the Harris Products Group knowledge, the information and recommendations contained in this publication are reliable and accurate as of the date prepared. However, accuracy, suitability, or completeness are not guaranteed, and no warranty, guarantee, or representation, expressed or implied, is made by Harris Products Group. as to the absolute correctness or sufficiency of any representation contained in this and other publications; Harris Products Group assumes no responsibility in connection therewith; nor can it be assumed that all acceptable safety measures are contained in this and other publications, or that other or additional measures may not be required under particular or exceptional conditions or circumstances. Data may be changed from time to time.

[ End of SDS ]





## Safety Data Sheet

**Material Name:** PERFORMANCE PLUS ENGINE OIL

**SDS ID:** 82545

**Includes Grades:** 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30

### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

**Material Name**

PERFORMANCE PLUS ENGINE OIL

Includes Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30

**Product Code**

Prefix 21

**Synonyms**

Petroleum oil; Lube oil; Petroleum hydrocarbon; Lubricant.

**Product Use Recommended Use**

For lubricating passenger car motors. If this product is used in combination with other products, refer to the Safety Data Sheets for those products.

**Restrictions on Use**

None known.

**MANUFACTURER/SUPPLIER**

Safety-Kleen Systems, Inc.  
2600 North Central Expressway  
Suite 200  
Richardson, TX 75080  
[www.safety-kleen.com](http://www.safety-kleen.com)

**IMPORTER/DISTRIBUTOR**

Safety-Kleen Canada, Inc.  
25 Regan Road  
Brampton, Ontario, Canada L1A 1B2

Phone: 1-800-669-5740

Emergency Phone #: 1-800-468-1760

**Issue Date**

March 30, 2017

**Supersedes Issue Date**

October 27, 2015

**Original Issue Date**

October 31, 1988

### Section 2 - HAZARDS IDENTIFICATION

**Classification in accordance with Schedule 1 of Canada's Hazardous Products Regulations (HPR) (SOR/2015-17) and paragraph (d) of 29 CFR 1910.1200 in the United States**

Not hazardous according to classification criteria.

**GHS Label Elements**

**Symbol(s)**

None needed according to classification criteria.

**Signal Word**

None needed according to classification criteria.

**Hazard Statement(s)**

None needed according to classification criteria.

**Precautionary Statement(s)**

**Prevention**

None needed according to classification criteria.

**Response**

None needed according to classification criteria.

**Storage**

## Safety Data Sheet

**Material Name: PERFORMANCE PLUS ENGINE OIL**

**SDS ID: 82545**

**Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30**

None needed according to classification criteria.

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) Not Otherwise Classified

Repeated exposure may cause skin dryness or cracking. When aerosolizing, misting, or heating these products, high concentrations of generated vapor or mist may irritate the respiratory tract (nose, throat, and lungs).

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
64741-88-4	Petroleum distillates, solvent-refined heavy paraffinic	0-100
64742-01-4	Residual oils, petroleum, solvent-refined	0-100
64742-57-0	Residual oils (petroleum), hydrotreated	0-100
72623-83-7	Lubricating oils, petroleum, C <sub>25</sub> , hydrotreated bright stock-based	0-100
64742-62-7	Residual oils (petroleum), solvent dewaxed	0-100
64742-58-1	Lubricating oils, petroleum, hydrotreated spent	3-100
72623-87-1	Lubricating oils, petroleum, C <sub>20-50</sub> , hydrotreated neutral oil-based	0-40
178603-64-0	Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C <sub>15-30</sub> , branched and cyclic, high viscosity index	0-45
178603-65-1	Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C <sub>20-40</sub> , branched and cyclic, high viscosity index	0-45
178603-66-2	Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C <sub>25-55</sub> , branched and cyclic, high viscosity index	0-45
Not Available	Mineral Oil	4-24
64742-52-5	Petroleum distillates, hydrotreated heavy naphthenic	0-26
68649-42-3	Phosphorodithioic acid, O,O-di-C <sub>1-14</sub> -alkyl esters, zinc salts	0.25-1.5

## Section 4 - FIRST AID MEASURES

### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if needed.

### Skin

IF ON SKIN: Wash with plenty of soap and water. Get medical attention, if needed.

## Safety Data Sheet

**Material Name: PERFORMANCE PLUS ENGINE OIL**

**SDS ID: 82545**

**Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30**

### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get medical attention if needed.

### Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

### Most Important Symptoms/Effects

#### Acute

No information on significant adverse effects.

#### Delayed

No information on significant adverse effects.

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

Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident.

## Section 5 - FIRE FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Carbon dioxide, regular foam, dry chemical, water spray, or water fog. Water or foam may cause frothing.

#### Unsuitable Extinguishing Media

Do not use high pressure water streams.

### Special Hazards Arising from the Chemical

Negligible fire hazard. Avoid friction, static electricity, and sparks.

### Hazardous Combustion Products

Burning may produce: Carbon monoxide, aldehydes, hydrogen sulfide, alkyl mercaptans, sulfides, oxides of sulfur, calcium and zinc and other unidentified organic compounds.

### Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Keep unnecessary people away, isolate hazard area and deny entry.

### Special Protective Equipment and Precautions for Firefighters

A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

## Section 6 - ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

### Methods and Materials for Containment and Cleaning Up

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal. Additionally, for large spills: Dike far ahead of liquid spill for collection and later disposal.

## Safety Data Sheet

**Material Name: PERFORMANCE PLUS ENGINE OIL**

**SDS ID: 82545**

**Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30**

### Section 7 - HANDLING AND STORAGE

#### **Precautions for Safe Handling**

Keep away from sparks or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. These products have a low vapor pressure and are not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating these products, do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with: Skin, eyes, clothing, shoes. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product.

#### **Conditions for Safe Storage, Including any Incompatibilities**

Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous.

#### **Incompatible Materials**

Acids, oxidizing materials, reactive halogens.

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### **Component Exposure Limits**

Canada, OSHA, NIOSH, and ACGIH have not developed exposure limits for any of this product's components.

#### **ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)**

There are no biological limit values for any of this product's components.

#### **Engineering Controls**

Provide general ventilation. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls.

#### **Individual Protection Measures, such as Personal Protective Equipment**

##### **Eye/face protection**

Wear safety glasses. Additional protection like goggles, face shields, or respirators may be needed dependent upon anticipated use and concentrations of mists or vapors. Eye wash fountain and emergency showers are recommended. Contact lens use is not recommended.

##### **Respiratory Protection**

A respiratory protection program which meets USA's OSHA General Industry Standard 29 CFR 1910.134 or Canada's CSA Standard Z94.4-M1982 requirements must be followed whenever workplace conditions warrant a respirator's use. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

##### **Glove Recommendations**

Where skin contact is likely, wear chemical impervious protective gloves; use of natural rubber or equivalent gloves is not recommended. When products are heated and skin contact is likely, wear heat-resistant gloves, boots, and other protective clothing. To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

##### **Protective Materials**

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to regulatory requirements. The following PPE should be considered the minimum required: Safety glasses, gloves, and lab coat or apron.

## Safety Data Sheet

**Material Name: PERFORMANCE PLUS ENGINE OIL**

**SDS ID: 82545**

**Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30**

### Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Amber liquid.	<b>Physical State</b>	Liquid
<b>Odor</b>	Petroleum odor.	<b>Color</b>	Amber
<b>Odor Threshold</b>	Not available	<b>pH</b>	Not available
<b>Melting Point</b>	Not available	<b>Boiling Point</b>	246 °C (475 °F Minimum )
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Flammability (solid, gas)</b>	Not available
<b>Autoignition Temperature</b>	Not available	<b>Flash Point</b>	195 °C (383 °F Minimum )
<b>Lower Explosive Limit</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Upper Explosive Limit</b>	Not available	<b>Vapor Pressure</b>	<0.1 mmHg @ 68°F °C (20° C )
<b>Vapor Density (air=1)</b>	Not available	<b>Specific Gravity (water=1)</b>	0.88 (Approximate Water = 1 )
<b>Water Solubility</b>	(Insoluble )	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	>20.5mm <sup>2</sup> /s @ 104°F	<b>Solubility (Other)</b>	Not available
<b>Density</b>	7.3 lb/gal (US Approximate )	<b>Pour Point</b>	-18 °C (0 °F Maximum )
<b>VOC</b>	Negligible as per U.S EPA 40 CFR 51.100(s)	<b>Molecular Weight</b>	Not available
<b>OSHA Flammability Class</b>	Not flammable		

**Other Property Information** No information available.

### Section 10 - STABILITY AND REACTIVITY

**Reactivity**

No reactivity hazard is expected.

**Chemical Stability**

Stable under normal temperatures and pressures.

**Possibility of Hazardous Reactions**

Will not polymerize.

**Conditions to Avoid**

Avoid sparks, flame, and other sources of ignition.

**Incompatible Materials**

Avoid oxidizing agents, reducing agents, and/or acids.

**Hazardous decomposition products**

None under normal temperatures and pressures.

## Safety Data Sheet

Material Name: PERFORMANCE PLUS ENGINE OIL

SDS ID: 82545

Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30

### Section 11 - TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

##### Inhalation

No information on significant adverse effects.

##### Skin Contact

Prolonged or repeated exposure may cause skin dryness or cracking.

##### Eye Contact

No information on significant adverse effects.

##### Ingestion

May be harmful if swallowed.

#### Acute and Chronic Toxicity

##### Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

##### Petroleum distillates, solvent-refined heavy paraffinic (64741-88-4)

Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg; Inhalation LC50 Rat >5530 mg/m<sup>3</sup> 4 h (no deaths occurred)

##### Residual oils, petroleum, solvent-refined (64742-01-4)

Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg; Inhalation LC50 Rat 2.18 mg/L 4 h

##### Lubricating oils, petroleum, C<sub>25</sub>, hydrotreated bright stock-based (72623-83-7)

Oral LD50 Rat >5000 mg/kg

##### Residual oils (petroleum), solvent dewaxed (64742-62-7)

Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg; Inhalation LC50 Rat 2.18 mg/L 4 h

##### Lubricating oils, petroleum, hydrotreated spent (64742-58-1)

Oral LD50 Rat >2000 mg/kg; Dermal LD50 Rabbit >4480 mg/kg

##### Lubricating oils, petroleum, C<sub>20-50</sub>, hydrotreated neutral oil-based (72623-87-1)

Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg; Inhalation LC50 Rat 2.18 mg/L 4 h

##### Petroleum distillates, hydrotreated heavy naphthenic (64742-52-5)

Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg

#### Product Toxicity Data

##### Acute Toxicity Estimate

Dermal	> 2000 mg/kg
Oral	> 2000 mg/kg

##### Immediate Effects

No information on significant adverse effects.

##### Delayed Effects

No information on significant adverse effects.

##### Irritation/Corrosivity Data

May cause slight skin and respiratory irritation.

##### Respiratory Sensitization

No information on significant adverse effects.

##### Dermal Sensitization

No information for the product.

##### Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

## Safety Data Sheet

**Material Name: PERFORMANCE PLUS ENGINE OIL**

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**Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30**

**Germ Cell Mutagenicity**

No information available for the product.

**Tumorigenic Data**

No information available for the product.

**Reproductive Toxicity**

No data available for this product.

**Specific Target Organ Toxicity - Single Exposure**

No information on significant adverse effects.

**Specific Target Organ Toxicity - Repeated Exposure**

No target organs identified.

**Aspiration hazard**

No data available.

**Medical Conditions Aggravated by Exposure**

Individuals with pre-existing respiratory tract (nose, throat, and lungs), eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

### Section 12 - ECOLOGICAL INFORMATION

**Ecotoxicity**

Harmful to aquatic life with long lasting effects.

**Component Analysis - Aquatic Toxicity**

<b>Petroleum distillates, solvent-refined heavy paraffinic</b>	<b>64741-88-4</b>
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Residual oils, petroleum, solvent-refined</b>	<b>64742-01-4</b>
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Lubricating oils, petroleum, C<sub>25</sub>+, hydrotreated bright stock-based</b>	<b>72623-83-7</b>
Fish:	LC50 96 h Lepomis macrochirus >10000 mg/L
<b>Residual oils (petroleum), solvent dewaxed</b>	<b>64742-62-7</b>
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Lubricating oils, petroleum, hydrotreated spent</b>	<b>64742-58-1</b>
Fish:	LC50 96 h Brachydanio rerio 79.6 mg/L [semi-static ]; LC50 96 h Pimephales promelas 3.2 mg/L [semi-static ]

## Safety Data Sheet

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<b>Lubricating oils, petroleum, C20-50, hydrotreated neutral oil-based</b>	<b>72623-87-1</b>
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Petroleum distillates, hydrotreated heavy naphthenic</b>	<b>64742-52-5</b>
Fish:	LC50 96 h Oncorhynchus mykiss >5000 mg/L
Invertebrate:	EC50 48 h Daphnia magna >1000 mg/L IUCLID
<b>Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts</b>	<b>68649-42-3</b>
Fish:	LC50 96 h Pimephales promelas 1 - 5 mg/L [static ]; LC50 96 h Pimephales promelas 10 - 35 mg/L [semi-static ]
Invertebrate:	EC50 48 h Daphnia magna 1 - 1.5 mg/L IUCLID

### **Persistence and Degradability**

No information available for the product.

### **Bioaccumulative Potential**

No information available for the product.

### **Mobility**

No information available for the product.

## Section 13 - DISPOSAL CONSIDERATIONS

### **Disposal Methods**

Dispose of contents/container in accordance with local/regional/national/international regulations.

Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, it can be managed in accordance with the used oil exemption under 40 CFR Part 279. Processing, use, or contamination by the user may change the waste code(s) applicable to the disposal of this product.

## Section 14 - TRANSPORT INFORMATION

### **US DOT Information:**

**UN/NA #:** Not regulated as a hazardous material.

### **IATA Information:**

**UN#:** Not regulated as a hazardous material.

### **IMDG Information:**

**UN#:** Not regulated as a hazardous material.

### **TDG Information:**

**UN#:** Not regulated as a hazardous material.

### **International Bulk Chemical Code**



# Safety Data Sheet

**Material Name: PERFORMANCE PLUS ENGINE OIL**

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**Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30**

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

## Section 15 - REGULATORY INFORMATION

### U.S. Federal Regulations

None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

### SARA Section 311/312 (40 CFR 370 Subparts B and C)

**Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: No**

### Component Analysis - Inventory

Petroleum distillates, solvent-refined heavy paraffinic (64741-88-4), Residual oils, petroleum, solvent-refined (64742-01-4), Residual oils (petroleum), hydrotreated (64742-57-0), Lubricating oils, petroleum, C<sub>25</sub>;25, hydrotreated bright stock-based (72623-83-7), Residual oils (petroleum), solvent dewaxed (64742-62-7), Lubricating oils, petroleum, hydrotreated spent (64742-58-1), Lubricating oils, petroleum, C<sub>20-50</sub>, hydrotreated neutral oil-based (72623-87-1), Petroleum distillates, hydrotreated heavy naphthenic (64742-52-5), Phosphorodithioic acid, O,O-di-C<sub>1-14</sub>-alkyl esters, zinc salts (68649-42-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes

Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C<sub>15-30</sub>, branched and cyclic, high viscosity index (178603-64-0)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	No	No	No	No	No	No	No	No	Yes	No	No	Yes

Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C<sub>20-40</sub>, branched and cyclic, high viscosity index (178603-65-1), Gas oils, petroleum, vacuum, hydrocracked, hydroisomerized, hydrogenated, C<sub>25-55</sub>, branched and cyclic, high viscosity index (178603-66-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2	KR - REACH CCA	CN	NZ	MX	TW
Yes	DSL	No	No	No	No	No	No	No	No	Yes	No	No	Yes

## Safety Data Sheet

**Material Name: PERFORMANCE PLUS ENGINE OIL**

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**Grades: 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 10W, 30, SAE 30**

### Section 16 - OTHER INFORMATION

**NFPA Ratings: Health: 1 Fire: 1 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

#### Summary of Changes

Revision to comply with WHMIS 2015.

**Key / Legend**ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KECI - Korea Existing Chemicals Inventory; KECL - Korea Existing Chemicals List; KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; NDSL - Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); WHMIS - Workplace Hazardous Materials Information System (Canada).

#### Other Information

**Disclaimer:**User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to the information or the product to which the information refers. The data contained on this sheet apply to the product as supplied to the user.

# SAFETY DATA SHEET

## 1. Identification

**Product identifier**                      **Worthington Water Soluble Soldering Flux**

**Other means of identification**

**SDS number**                              WC015

**Recommended use**                      Soldering flux.

**Recommended restrictions**              None known.

### Manufacturer/Importer/Supplier/Distributor information

**Manufacturer/Supplier**                  Worthington Industries Incorporated

**Address**                                      200 Old Wilson Bridge Road

Columbus, OH 43085

United States

**Email:**                                        cylinders@worthingtonindustries.com

**Telephone Number:**                      866-928-2657

**CHEMTREC - 24 HOURS:**

**Within US and Canada**                      800-424-9300

**Outside US and Canada**                    +1 703-741-5970 (collect calls accepted)

## 2. Hazard(s) identification

**Physical hazards**                              Not classified.

**Health hazards**                              Skin corrosion/irritation                      Category 2

Serious eye damage/eye irritation                      Category 1

**Environmental hazards**                      Hazardous to the aquatic environment, acute hazard                      Category 2

Hazardous to the aquatic environment, long-term hazard                      Category 2

### Label elements



**Signal word**                                      Danger

**Hazard statement**                              Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects.

### Precautionary statement

**Prevention**                                      Wash thoroughly after handling. Avoid release to the environment. Wear eye protection/face protection. Wear protective gloves.

**Response**                                      IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Collect spillage.

**Storage**    Store away from incompatible materials.

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

**Other hazards**                                      None known.

**Supplemental information**                      None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
ZINC CHLORIDE	7646-85-7	1 - 3

<b>Composition comments</b>	<p>All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.</p> <p>Unlisted percentages are non-hazardous stabilizers and water. None of the products in this material are listed in NTP, IARC, or OSHA as carcinogens.</p>
<b>4. First-aid measures</b>	
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention if discomfort persists.
<b>Skin contact</b>	Remove and isolate contaminated clothing and shoes. Immediately flush with plenty of water for at least 15 minutes. Wash clothing separately before reuse. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<b>Ingestion</b>	If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to a victim who is unconscious or is having convulsions. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Causes skin irritation. May cause redness and pain. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically. Exposure may aggravate pre-existing respiratory, lung or kidney disorders.
<b>General information</b>	Show this safety data sheet to the doctor in attendance.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Fire may produce irritating, corrosive and/or toxic gases.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do it without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Will release small amounts of HCL upon decomposition.
<b>6. Accidental release measures</b>	
<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Prevent product from entering drains. Stop the flow of material, if this is without risk. Neutralize with Sodium Bicarbonate or Soda Ash. Dilute with plenty of water. Clean surface thoroughly to remove residual contamination. Do not flush to sewer.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	Do not get in eyes and avoid contact with skin and clothing. Do not breathe fume/mist/vapors. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store in original tightly closed container. Store below melting temperature. Keep away from heat. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ZINC CHLORIDE (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
ZINC CHLORIDE (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
ZINC CHLORIDE (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
ZINC CHLORIDE (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
ZINC CHLORIDE (CAS 7646-85-7)	STEL	2 mg/m3	Fume.
	TWA	1 mg/m3	Fume.

#### Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
ZINC CHLORIDE (CAS 7646-85-7)	TWA	1 mg/m3	Fume.

#### Biological limit values

No biological exposure limits noted for the ingredient(s).

#### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide easy access to water supply and eye wash facilities.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear approved safety glasses or goggles.

##### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

##### Other

Wear appropriate chemical resistant clothing.

##### Respiratory protection

Use a respirator when local exhaust or ventilation is not adequate to keep exposures below the OEL. In a confined space a supplied respirator may be required. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

##### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

#### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

<b>Appearance</b>	White paste.
<b>Physical state</b>	Semi-solid.
<b>Form</b>	Paste.
<b>Color</b>	White.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	1
<b>Melting point/freezing point</b>	140 °F (60 °C) / 14 °F (-10 °C)
<b>Initial boiling point and boiling range</b>	219.2 °F (104 °C)
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	0.6 (Butyl acetate = 1)
<b>Flammability (solid, gas)</b>	Non flammable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	0.99 (H2O=1)
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Completely soluble in water.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>VOC</b>	0 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Contact with metals. Excessive heat or cold. Contact with incompatible materials.
<b>Incompatible materials</b>	Alkalines. Strong oxidizing agents. Reducing agents. Cyanides. Combustible material.
<b>Hazardous decomposition products</b>	Thermal decomposition or combustion may liberate corrosive gases or fumes. Hydrogen chloride gas. Zinc oxides. Zinc chloride. Ammonium fume.

## 11. Toxicological information

<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	Irritating to respiratory system.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	May cause discomfort if swallowed.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Causes skin irritation. May cause redness and pain. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
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**Information on toxicological effects**

<b>Acute toxicity</b>	Not expected to be acutely toxic.
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Components	Species	Test Results
ZINC CHLORIDE (CAS 7646-85-7)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Mouse	350 mg/kg

<b>Skin corrosion/irritation</b>	Causes skin irritation.
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<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.
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**Respiratory or skin sensitization**

**Canada - Alberta OELs: Irritant**

ZINC CHLORIDE (CAS 7646-85-7)	Irritant
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<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
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<b>Skin sensitization</b>	Not a skin sensitizer.
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<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
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<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
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<b>Specific target organ toxicity - single exposure</b>	Not classified.
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<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
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<b>Aspiration hazard</b>	Not an aspiration hazard.
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<b>Chronic effects</b>	Can cause delayed lung injury.
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## 12. Ecological information

<b>Ecotoxicity</b>	Toxic to aquatic life with long lasting effects.
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Components		Species	Test Results
ZINC CHLORIDE (CAS 7646-85-7)			
Aquatic			
Crustacea	EC50	American or virginia oyster (Crassostrea virginica)	0.1511 - 0.2782 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.101 - 0.197 mg/l, 96 hours

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
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<b>Bioaccumulative potential</b>	No data available on bioaccumulation.
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<b>Mobility in soil</b>	This product is water soluble and may disperse in soil.
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<b>Other adverse effects</b>	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
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## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
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<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
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<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
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<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
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**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information****TDG**

<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC CHLORIDE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**IATA**

<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s. (Zinc chloride)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	9L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC CHLORIDE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-A, S-F
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**15. Regulatory information****Canadian regulations**

This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

**Controlled Drugs and Substances Act**

Not regulated.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**International regulations****Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.



**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information**

<b>Issue date</b>	17-July-2016
<b>Revision date</b>	-
<b>Version #</b>	01
<b>Further information</b>	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
<b>References</b>	EPA: AQUIRE database NLM: Hazardous Substances Data Base US. IARC Monographs on Occupational Exposures to Chemical Agents HSDB® - Hazardous Substances Data Bank IARC Monographs. Overall Evaluation of Carcinogenicity National Toxicology Program (NTP) Report on Carcinogens ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
<b>Disclaimer</b>	All information in this Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.