

Propane

Date of Preparation: August 8, 2016

Section 1: IDENTIFICATION

Product Name:

Propane

Synonyms:

LPG (Liquefied Petroleum Gas); LP-Gas.

Product Use:

Propane is commonly used as a fuel for heating, cooking, automobiles, forklift trucks, crop drying and welding and cutting operations. Propane is used in industry as a refrigerant, solvent

and as a chemical feedstock.

Restrictions on Use:

Not available.

Manufacturer/Supplier:

Superior Propane

Suite 400, 6750 Century Avenue Mississauga, ON L5N 2V8

Phone Number:

1-877-873-7467

Emergency Phone:

CANUTEC 1-888-CAN-UTEC (226-8832) or 613-996-6666 or

*666 on a cellular phone

Date of Preparation of SDS:

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Section 2: HAZARD(S) IDENTIFICATION

GHS INFORMATION

Classification:

Flammable Gases, Category 1

Gases Under Pressure - Compressed Gas

Simple Asphyxiant

LABEL ELEMENTS

Hazard

Pictogram(s):



Signal Word:

Danger

Hazard

Extremely flammable gas.

Statements:

Contains gas under pressure; may explode if heated.

May displace oxygen and cause rapid suffocation.

Precautionary Statements

Prevention: Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

Response: Leaking gas fire: Do not extinguish unless leak can be stopped safely.

Eliminate all ignition sources if safe to do so.

Storage: Store in a well ventilated place.

Disposal: Not applicable.

Hazards Not Otherwise Classified:

Not applicable.

Ingredients with Unknown Toxicity:

None.

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



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Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% vol./vol
Propane	Not available.	74-98-6	90 - 99
Ethane	Not available.	74-84-0	0 - 5
1-Propene	Propylene	115-07-1	0 - 5
Butane	Not available.	106-97-8	0 - 2.5

Section 4. FIRST-AID MEASURE

Inhalation: Call a poison center or doctor if you feel unwell.

Acute and delayed symptoms and effects: May displace oxygen and cause rapid suffocation. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and

nose and throat pain.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact

lenses, if needed. Continue rinsing. Immediately call a poison center or

doctor.

Acute and delayed symptoms and effects: Contact with rapidly expanding or liquefied gas may cause irritation and/or frostbite. The pain after contact with liquid can quickly subside. Permanent eye damage or blindness could result. May cause eye irritation. Signs/symptoms may include redness,

swelling, pain, tearing, and blurred or hazy vision.

Skin Contact: Contact with rapidly expanding or liquefied gas may cause irritation and/or

frostbite. If on skin: Wash with plenty of water. Get immediate medical advice/attention. Thaw frosted parts with lukewarm water. Do not rub affected area. Remove non-adhering contaminated clothing. Do not

remove adherent material or clothing.

Acute and delayed symptoms and effects: Contact with rapidly expanding or liquefied gas may cause irritation and/or frostbite. Symptoms of frostbite include change in skin colour to white or grayish-yellow. The pain after contact with liquid can quickly subside. May cause skin irritation.

Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: Not a normal route of exposure.

Acute and delayed symptoms and effects: Not a normal route of exposure.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately

(show the label or SDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Extremely flammable gas. Contains gas under pressure; may explode if heated. Will be easily ignited by heat, sparks or flames. Will form explosive mixtures with air. Vapors from liquefied gas are initially heavier than air and spread along ground. Vapors may travel to source of ignition and flash back. Cylinders exposed to fire may vent and release flammable gas through



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pressure relief devices. Containers may explode when heated. Ruptured cylinders may rocket. DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

If a tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.

Fire involving Tanks: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discolouration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Sensitivity to Mechanical Impact:

This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge:

This material is sensitive to static discharge.

MEANS OF EXTINCTION Suitable Extinguishing Media:

Small Fire: Dry chemical or CO2.

Large Fire: Water spray or fog. Move containers from fire

area if you can do it without risk.

Unsuitable Extinguishing Media:

Not available.

Products of Combustion:

Oxides of carbon.

Protection of Firefighters:

Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Vapors may cause dizziness or asphyxiation without warning. Some may be irritating if inhaled at high concentrations. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. Fire may produce irritating and/or toxic gases. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Always wear thermal protective clothing when handling refrigerated/cryogenic

liquids.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures:

As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of low areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded.

Personal Precautions:

Do not touch or walk through spilled material. Use personal

protection recommended in Section 8.

Environmental Precautions:

Not normally required.

Methods for Containment:

Stop leak if you can do it without risk. If possible, turn leaking containers so that gas escapes rather than liquid. Use water spray



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to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material. Do not direct water at spill or

source of leak.

Methods for Clean-Up:

Prevent spreading of vapors through sewers, ventilation systems and confined areas. Isolate area until gas has dispersed. CAUTION: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

Other Information:

See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Handling:

Avoid breathing gas. Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Pressurized container: Do not pierce or burn, even after use. See Section 8 for information on Personal Protective Equipment.

Storage:

Store in a well-ventilated place. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines Component

Propane [CAS No. 74-98-6]

ACGIH: Asphyxia

OSHA: 1000 ppm (TWA), 1800 mg/m³ (TWA);

Ethane [CAS No. 74-84-0]

ACGIH: Asphyxia

OSHA: No PEL established.

Propylene [CAS No. 115-07-1]

ACGIH: 500 ppm (TWA); A4 (2005)

OSHA: No PEL established.

Butane [CAS No. 106-97-8]

ACGIH: 1000 ppm (TWA); (2012) **OSHA:** 800 ppm (TWA) [Vacated];

PEL: Permissible Exposure Limit **TWA:** Time-Weighted Average

C: Ceiling

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.



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PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection: Safety glasses are required. Use equipment for eye protection that

meets the standards referenced by CSA Standard CAN/CSA-Z94.3-92 and OSHA regulations in 29 CFR 1910.133 for Personal

Protective Equipment.

Hand Protection: Wear protective gloves. Wear cold insulating gloves. Consult

manufacturer specifications for further information.

Skin and Body Protection: Wear protective clothing.

Respiratory Protection: If engineering controls and ventilation are not sufficient to control

exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-11, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-

purifying respirators.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential

and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquefied gas.

Colourless.

Odourless, unless odourized with ethyl mercaptan (skunky odour,

similar to boiling cabbage).

Odour Threshold: 4800 ppm

Physical State: Gas.

pH: Not available.

Melting Point / Freezing -188 °C (-306.4 °F)

Initial Boiling Point: -42.2 °C (-44 °F)

Boiling Point: -42 °C (-43.6 °F)

Flash Point: -103.4 °C (-154.1 °F) (Closed Cup)

Evaporation Rate: Rapid.

Flammability (solid, gas): Extremely flammable gas.

Lower Flammability Limit: 2.1%

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Upper Flammability Limit:

Vapor Pressure:

1435 kPa (maximum) at 37.8 °C (100 °F)

Vapor Density:

1.52 (Air = 1)

9.5%

Relative Density:

0.51 (Water = 1)

Solubilities:

Slight, 6.1% by volume @ 17.8°C (64 °F)

Partition Coefficient: n-

Octanol/Water:

Not available.

Auto-ignition Temperature:

432 °C (809.6 °F)

Decomposition Temperature:

Not available.

Viscosity:

Not available.

Percent Volatile, wt. %:

Not available.

VOC content, wt. %:

Not available.

Density:

Not available.

Coefficient of Water/Oil

Distribution:

Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity:

Contact with incompatible materials. Sources of ignition. Exposure to

heat.

Chemical Stability:

Stable under normal storage conditions.

Possibility of Hazardous

Reactions:

Gas explodes spontaneously when mixed with chloride dioxide.

Conditions to Avoid:

Contact with incompatible materials. Sources of ignition. Exposure to

heat.

Incompatible Materials:

Oxidizers. Chlorine dioxide.

Hazardous Decomposition Products:

Carbon dioxide. Carbon monoxide.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral:

Not available.

Dermal:

Not available.

Inhalation:

Not available.

Component Toxicity

CAS No. Component

LD₅₀ oral

LD50 dermal

LC₅₀

Propane

74-98-6

Not available.

Not available.

Not available.

Ethane

74-84-0

Not available.

Not available.

Not available.

Propylene

115-07-1

Not available.

Not available.

86000 mg/m³ (rat); 4H

Butane

106-97-8

Not available.

Not available.

658000 mg/m³ (rat); 4H



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Likely Routes of Exposure: Eye contact. Skin contact. Inhalation.

Target Organs:

Skin. Eyes. Respiratory system. Central nervous system.

Symptoms (including delayed and immediate effects)

May displace oxygen and cause rapid suffocation. May cause respiratory irritation.

Signs/symptoms may include cough, sneezing, nasal discharge, headache,

hoarseness, and nose and throat pain.

Contact with rapidly expanding or liquefied gas may cause irritation and/or frostbite. Eye:

> The pain after contact with liquid can quickly subside. Permanent eye damage or blindness could result. May cause eye irritation. Signs/symptoms may include

redness, swelling, pain, tearing, and blurred or hazy vision.

Skin: Contact with rapidly expanding or liquefied gas may cause irritation and/or frostbite.

Symptoms of frostbite include change in skin colour to white or grayish-yellow. The

pain after contact with liquid can quickly subside. May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: Not a normal route of exposure.

Skin Sensitization:

Not available.

Respiratory Sensitization:

Not available.

Medical Conditions

Not available.

Aggravated By Exposure:

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs:

Skin, Eyes, Respiratory system, Central nervous system.

Chronic Effects:

Not available.

Carcinogenicity:

Product is not classified as a carcinogen. See Component

Carcinogenicity table below for information on individual components.

Component Carcinogenicity

Component

ACGIH

IARC

NTP

OSHA

Prop 65

Propylene

A4

Group 3

Not listed.

Not listed. Not listed.

Mutagenicity:

Not available.

Reproductive Effects:

Not available.

Developmental Effects

Teratogenicity:

Not available.

Embryotoxicity:

Not available.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Not available.

Persistence / Degradability:

Not available.

Bioaccumulation / Accumulation:

Not available.

Mobility in Environment:

Not available.



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Other Adverse Effects:

Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name:

UN1075, LIQUEFIED PETROLEUM GASES, 2.1

Class:

2.1

UN Number:

UN1075

Packing Group:

Not applicable.

Label Code:



Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name:

UN1075, LIQUEFIED PETROLEUM GASES, 2.1

Class:

2.1

UN Number:

UN1075

Packing Group:

Not applicable.

Label Code:



Section 15: REGULATORY INFORMATION

Chemical Inventories

US (TSCA)

The components of this product are in compliance with the chemical notification requirements of TSCA.

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations

United States

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III

Component	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (Ibs.)	CERCLA RQ (lbs.)	Section 313	RCRA CODE	CAA 112(r) TQ (lbs.)
Propane	Not listed.	Not listed.	Not listed.	Not listed.	Not listed.	10000
Ethane	Not listed.	Not listed.	Not listed.	Not listed.	Not listed.	10000



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Section 1: IDENTIFICATION

Product Name:

Propane

Synonyms:

LPG (Liquefied Petroleum Gas); LP-Gas.

Product Use:

Propane is commonly used as a fuel for heating, cooking, automobiles, forklift trucks, crop drying and welding and cutting operations. Propane is used in industry as a refrigerant, solvent

and as a chemical feedstock.

Restrictions on Use:

Not available.

Manufacturer/Supplier:

Superior Propane

Suite 400, 6750 Century Avenue Mississauga, ON L5N 2V8

Phone Number:

1-877-873-7467

Emergency Phone:

CANUTEC 1-888-CAN-UTEC (226-8832) or 613-996-6666 or

666 on a cellular phone

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Section 2: HAZARD(S) IDENTIFICATION

GHS INFORMATION

Classification:

Flammable Gases, Category 1

Gases Under Pressure - Compressed Gas

Simple Asphyxiant

LABEL ELEMENTS

Hazard

Pictogram(s):



Signal Word:

Danger

Hazard

Extremely flammable gas.

Statements:

Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffication.

Precautionary Statements

Prevention: Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

Response:

Leaking gas fire: Do not extinguish unless leak can be stopped safely.

Eliminate all ignition sources if safe to do so.

Storage: Store in a well ventilated place.

Disposal: Not applicable.

Hazards Not Otherwise Classified:

Not applicable.

Ingredients with Unknown Toxicity:

None.

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



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Propylene Not listed. Butane Not listed.

Not listed. Not listed. Not listed. Not listed.

313 Not listed.

Not listed. Not listed. 10000 10000

State Regulations Massachusetts

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts

Regulations Section 670.000)

Component CAS No. **RTK List** Propane 74-98-6 Listed. Ethane 74-84-0 Listed. Propylene 115-07-1 Listed. Butane 106-97-8 Listed.

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section

31.07(3)		
Component	CAS No.	RTK List
Propane	74-98-6	SHHS
Ethane	74-84-0	SHHS
	115-07-1	
Butane	106-97-8	
Propylene Butane	115-07-1	SHHS SHHS

Note: SHHS = Special Health Hazard Substance

Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

	(54 Fa. Code Chap, 301-323)			
Component	CAS No.	RTK List		
Propane	74-98-6	Listed.		
Ethane	74-84-0	Listed.		
Propylene	115-07-1	F		
Butane	106-97-8	Listed.		
Note: E - Environmental III	100 01 0	Listeu.		

Note: E = Environmental Hazard

California Prop 65: This product does not contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

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Version:

1.0

GHS SDS Prepared by:

Deerfoot Consulting Inc.

Phone: (403) 720-3700

REPRODUCTIVE TOXICITY

Oxidized Asphalt, Fibreglass: No information available.

MUTAGENICITY

Oxidized Asphalt, Fibreglass: No information available.

TOXICOLOGICALLY SYNERGISTIC MATERIALS

Oxidized Asphalt, Fibreglass: No information available.

POTENTIAL FOR ACCUMULATION

Oxidized Asphalt, Fibreglass: No information available.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT

Wash gently with warm water and soap to remove dust. In case of contact with hot product, treat as an ordinary burn. Do not attempt to remove material from affected area without medical assistance. Flush skin immediately with large volumes of cold water. Obtain immediate medical attention.

EYE CONTACT

Flush eyes with water for at least 15 minutes while holding eyelids open. Do not attempt to remove material from affected area without medical assistance. Obtain medical attention.

INHALATION

Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

INGESTION

Rinse mouth with water to remove dust, and drink plenty of water to help reduce irritation.

SECTION V: FIRE-FIGHTING MEASURES

FLAMMABILITY:

Asphalt fumes are flammable.

EXPLOSION DATA:

Not established

FLASH POINT:

Not applicable

AUTO-IGNITION TEMPERATURE:

Not available

FLAMMABILITY LIMITS IN AIR: (% in volume)

Not available

FIRE HAZARDS

Asphalt fumes are flammable. Never work in a closed area to avoid accumulation of gas. Do not use water. Always stay away from containers exposed to excessive heat.

COMBUSTION PRODUCTS

Carbon monoxide, carbon dioxide and incomplete combustion products. Burning of this material will produce thick black smoke. Irritating and/or toxic fumes and gases including Hydrogen Sulphide and Sulphur Dioxide may be generated by thermal decomposition or combustion.

FIRE FIGHTING INSTRUCTIONS

Evacuate area. Wear self-contained breathing apparatus and appropriate protective clothing in accordance with standards. Approach fire from upwind and fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Always stay away from containers because of the risk of explosion. Stop leak before attempting to put out the fire. If leak cannot be stopped, and if there is no risk to the surrounding area, let the fire burn itself out. Move containers from fire area if this can be done without risk. Cool containers with flooding quantities of water until well after fire is out.

EXTINGUISHING MEDIA

Foam, carbon dioxide, sand, dry chemical.

SECTION VI: ACCIDENTAL RELEASE MEASURES

RELEASE OR SPILL

Eliminate all sources of ignition. If hot material is spilled, allow enough time to cool completely and remove to a container for disposal. Wear appropriate breathing apparatus (if applicable) and protective clothing. Notify appropriate environmental agency(ies). Wash spill area with soap and water. Prevent entry into waterways, sewers, basements or confined areas.

SECTION VII: HANDLING AND STORAGE

HANDLING

Avoid prolonged exposure to mist, fumes or vapours from hot material. Minimise skin and eye contact. Use under adequate ventilation measures. Wash body parts after handling.

STORAGE

Store material away from all sources of heat and ignition in a fresh, well ventilated area. Keep away from children. Ayoid the accumulation of dust.

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

HANDS: Wear resistant gloves.

RESPIRATORY: If the TLV to dast is exceeded, if use is performed in a poorly ventilated confined area, use an approved respirator in accordance with standards.

EYES: Wear chemical safety goggles in accordance with standards.

OTHERS: Eye bath and safety shower.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:

Solid

ODOUR AND APPEARANCE: Semi-flexible asphaltic core with asphalt odour

ODOUR THRESHOLD:

Not applicable

VAPOUR DENSITY (air = 1): EVAPORATION RATE (Butyl acetate = 1): Not applicable Not applicable

BOILING POINT (760 mm Hg): FREEZING POINT:

Not determined Not applicable

SPECIFIC GRAVITY ($H_2O = 1$): SOLUBILITY IN WATER (20°C): Variable

VOLATILE ORGANIC COMPOUND CONTENT (V.O.C.):

VISCOSITY:

Not available Not applicable

SECTION X: STABILITY AND REACTIVITY

STABILITY: This material is stable.

CONDITIONS OF REACTIVITY: Avoid excessive heat.

INCOMPATIBILITY: Avoid accidental contact of hot product with water, which may cause violent eruptions. Avoid strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: None identified.
HAZARDOUS POLYMERISATION: None

SECTION XI: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA

Not available.

Effects of Short-Term (Acute) Exposure

INHALATION

No information available.

EYE IRRITATION

No information available.

SKIN IRRITATION

No information available.

Effects of Long-Term (Chronic) Exposure

TARGET ORGANS

No information available.

CARCINOGENICITY

No information available.

REPRODUCTIVE EFFECTS

No information available.

TERATOGENICITY, EMBRYOTOXICITY, FETOTOXICITY No information available.