



## Material Safety Data Sheet

**Propane (MSDS)**

Propane

**1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION:**

Distributor: Mobile Propane Services Inc.  
424 1<sup>st</sup>. Avenue East  
Regina, Saskatchewan  
S4N-5T6

Phone Numbers: Regina, (306) 721-5161  
Saskatoon (306) 222-3545  
Transport Emergency (613) 996-6666

Chemical Family: Petroleum Hydrocarbon

Trade Names and Synonyms: Propane, Stench Propane  
HD5 Propane (Propylene < 5%)

CAS Number: 74-98-6

MSDS Number: CAN00250

Revision Date: January 14, 2003

WHMIS Classification: Class A: Compressed Gas  
Class B1: Flammable Gas

**2. COMPOSITION/INFORMATION ON INGREDIENTS:**

Components/Material	CAS Number	Per Cent
Propane	74-98-6	85-100
Propylene	115-07-1	<5%
Ethyl Mercaptan	75-08-1	0-0.0020

**3. HAZARDS IDENTIFICATION:**

Potential Health Effects

Primary Routes of Exposure/ Entry: Inhalation

Acute Toxicity Data: The LC50 is above 40% volume/ volume.

Other Toxicity Data: Product may cause weakness, headache, confusion, blurred vision, drowsiness, nausea, and other nervous system effects. Greater overexposure may cause dizziness, slurred speech, flushed face, irritation to the eyes, skin and lungs, unconsciousness, or convulsions and may lead to asphyxiation. High concentration, usually above 10%, may sensitize the heart and lead to fatal cardiac arrhythmias. Contact with liquefied product may cause frostbite.

#### Odorant:

The odorant, ethyl mercaptan, can be irritating to the eyes, skin and respiratory tract. At high concentrations, a person can temporarily lose the ability to smell ethyl mercaptan; In addition, some individuals may have an impaired sense of smell, which inhibits the detection of the odorant. Propane and odorant are heavier than air and will collect and pool along the ground or floor. Odorant, therefore, may not be detectable above the location of propane storage or service (for example, odorant in propane released or leaked into the basement of a dwelling may not be detected above the basement).

#### WARNING

The intensity of the odorant may fade over prolonged storage or in the presence of rust, when placed initially in new or freshly cleaned storage vessels, or when exposed to masonry.

#### DEALERS

Familiarize yourself and your customers with this warning and other facts associated with odor fade.

#### CARCINOGENICITY INFORMATION

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP or ACGTH as carcinogens.

---

#### 4. FIRST AID MEASURES

##### Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

##### Skin Contact:

Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.

##### Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes. Check for frostbite. Call a physician.

##### Ingestion:

Ingestion is not considered a potential route of exposure.

#### NOTES TO PHYSICIANS

Because of a possible increased risk of eliciting cardiac dysrhythmias, catecholamine drugs, such as epinephrine, should be used with caution in situations of emergency life support.

---

## 5. FIRE-FIGHTING MEASURES.

### FLAMMABLE PROPERTIES

Flash Point: Gas  
Flammable Limits  
In Air, by volume: LEL 2.1; UEL 9.5  
Autoignition: 851 F (455 C)

Vapor forms explosive mixture with air, Vapor or gases may travel considerable distances to ignition source and flash back,

Compressed Gas, Flammable.

### EXTINGUISHING MEDIA

If gas has ignited, do not extinguish. Stop gas flow. Allow to burn out.

### FIRE-FIGHTING INSTRUCTIONS

Stop flow of gas. Use water, keep fire-exposed, containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak.

Highly Flammable. Do not enter a vapor cloud due to potential for flash fire. Products of combustion may contain carbon monoxide, carbon dioxide, and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

---

## 6. ACCIDENTAL RELEASE MEASURES

### SAFEGUARDS (PERSONNEL)

Note: Review FIRE\_FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.

Evacuate personnel. Thoroughly ventilate area. Use self-contained breathing apparatus. Keep upwind of leak. Evacuate until gas has dispersed. Remove sources of heat, sparks, flame, impact, friction and electricity including internal combustion engines and power tools. If equipment is to be used for spill clean up, it must be explosion proof and suitable for flammable liquid and vapors.

NOTE: Vapors released from the spill may create an explosive atmosphere.

See HAZARDS IDENTIFICATION, Odorant.

---

## 7. HANDLING AND STORAGE

### HANDLING (PERSONNEL)

Avoid breathing gas. Avoid contact with eyes, Skin or clothing. Wash thoroughly after handling. Wash clothing after use.

### HANDLING (PHYSICAL ASPECTS)

Use of non-sparking and explosion-proof equipment may be necessary depending on type of operation. Keep away from heat, sparks and flames.

### STORAGE

Store in a well-ventilated place. Keep container tightly closed. Store in accordance with National Fire Protection Association regulations. Store away from ignition sources, oxidizers.

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### ENGINEERING CONTROLS

#### Ventilation:

Storage and use areas should be well ventilated. Explosion-proof mechanical ventilation should be used in enclosed areas. See HAZARDS IDENTIFICATION, Odorant.

### PERSONAL PROTECTIVE EQUIPMENT

#### Respiratory Protection:

Personnel should never enter areas of high concentrations without proper respiratory protection. Provide NIOSH-approved, air-supplied respirator or self-contained breathing equipment for emergency or non-routine situations where the level of excessive.

#### Protective Gloves:

Should be worn to prevent frostbite, which can be caused by rapid evaporation when handling as a liquid.

#### Eye Protection:

Face shield and chemical goggles when changing valves, hoses, etc., in compressed gas or liquid hydrocarbon service. Full-face piece if respiratory protection is required.

#### Other Protective Equipment:

If there is a possibility of skin contact with the liquid, thermally protective, impervious clothing should be worn to protect from frostbite.

## EXPOSURE GUIDELINES/EXPOSURE LIMITS

### Propane

PEL (U.S. OSHA): 1.000ppm, 1,800mg/m<sup>3</sup>. 8Hr.TWA  
TLV (ACGIH/CCGIH): 2.500ppm 8Hr.TWA  
Other isomers: 500ppm, 1.760 mg/m<sup>3</sup>  
STEL 1,000ppm, 3,500mg/m<sup>3</sup>

### Propylene

PEL (U.S. OSHA): None established.  
TLV (ACGIH/CCGIH): Simple Asphyxiant A4

### Ethyl Mercaptan

PEL (U.S. OSHA): 10ppm, 25mg/m<sup>3</sup>, Ceiling  
TLV (ACGIH/CCGIH): 0.5ppm, 8 Hr TWA

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL DATA

Boiling Point: -54 to -44 F (-48 to -42 C)  
Vapor Density: 1.6 (Air 1)  
Vapor Pressure: 10,000mmHg at 100 F (38 C) or 200 psia at 100 F  
% Volatiles (by volume) 100  
Solubility in Water: Very slightly soluble.  
Odor: Product sold for use as fuel may contain merchantman odorant.  
Form: Gas (Liquid under pressure)  
Color: Colorless  
Specific Gravity: Liquid - 0.5-0.6 (Water = 1)

---

## 10. STABILITY AND REACTIVITY

### CHEMICAL STABILITY

Stables.

### CONDITIONS TO AVOID

Heat, sparks, and flames.

### INCOMPATIBILITY WITH OTHER MATERIALS

Incompatible with strong oxidizing materials. Avoid contact with peroxides, plastics, and chlorine dioxide.

### DECOMPOSITION

Normal combustion forms carbon dioxide: incomplete combustion may produce carbon monoxide.

## POLYMERIZATION

Polymerization will not occur

---

## 11. TOXICOLOGICAL INFORMATION

Sew HAZARDS IDENTIFICATION

---

## 12. ECOLOGICAL INFORMATION

No specific aquatic data for this product.

---

## 13. DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, Provincial and local regulations. Allow to evaporate or disperse leaks in air, making sure gas/vapor is dissipated below lower explosive limits.

If the material is to be disposed of as a compressed gas (e.g., in cylinders), it must be managed as a RCRA ignitable hazardous waste.

---

## 14. TRANSPORTATION INFORMATION

### SHIPPING INFORMATION

Canadian TDG

Proper Shipping Name:

Propane

Class:

2.1

Pin No.

UN 1978

Label:

Flammable Gas

Placard Required:

Flammable Gas

Or

Proper Shipping Name

Petroleum Gases, Liquefied or Liquefied  
Petroleum Gas

Class:

2.1

Pin No.:

UN 1075

Label:

Flammable Gas

Placard Required:

Flammable Gas

---

## 15. OTHER REGULATORY INFORMATION

### DSL DETERMINATION:

Product and/or components are listed in the Canadian Domestic Substances List.

---

## 16. OTHER INFORMATION

### NFPA RATINGS

Health	1
Flammability	4
Reactivity	0

### NPCA-HMIS RATINGS

Health	1
Flammability	4
Reactivity	0

Personal Protection Rating to be supplied by user depending on use conditions.

### ADDITIONAL INFORMATION

Product Use: Fuel

Additional information concerning ethyl mercaptan and odor fade may be obtained from the Canadian Propane Gas Association.

# Indicates revised section and/or information.

---

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

MSDS Responsibility: Safety and Operations Director  
General Information: Mobile Propane Services Inc.  
424 1<sup>st</sup>. Ave. East.  
Regina, Saskatchewan. S4N-5T6

Revised this \_\_\_15\_\_\_ day of \_\_\_August\_\_\_, 2008

Prepared By: \_\_\_\_\_Morris Young\_\_\_\_\_