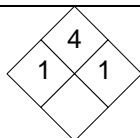










NFPA / WHMIS	Personal Protection	DOT/TDG Road/Rail
   	   	

## Section I. Product Identification and Uses

<b>Common/Trade name</b>	<b>Propylene, Chemical Grade (Lima)</b>		
<b>Synonyms</b>	Chemical Grade Propylene, Propene, Methylene, Methyl Ethylene, 1-Propene	<b>CAS #</b>	115-07-1
<b>Chemical family</b>	Hydrocarbon	<b>DSL</b>	This product is on the Domestic Substances List (DSL). TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.
<b>Supplier</b>	Husky Lima Refinery, 1150 South Metcalf Street, Lima OH, 45804 403-298-6111 (General Information)	<b>Manufacturer</b>	Husky Lima Refinery 1150 South Metcalf Street Lima, OH 45804
<b>Material uses</b>	ORGANIC SYNTHESIS; HOUSEHOLD AND INDUSTRIAL FUEL.		

## Section 2. First Aid Measures

<b>Eye contact</b>	Contact with rapidly expanding or liquified gas may cause irritation and/or frostbite. Flush eyes for at least 15 minutes with clean water. Patch lightly, allowing drainage. Seek medical attention.
<b>Skin contact</b>	Contact with rapidly expanding or liquified gas may cause irritation and or frostbite. Seek medical attention. Flush immediately with running water. Remove non-adhering contaminated clothing. Do not remove adherent material or clothing.
<b>Inhalation</b>	Protect rescuer. Move exposed person to fresh air. If breathing has stopped apply artificial respiration. Seek medical attention.
<b>Ingestion</b>	Not applicable (gas).

## Section 3. Hazardous Ingredients

		ACGIH TLVs (OSHA PELs in Section 7)						
Name	CAS #	TWA (ppm)	TWA (Mg/M3)	STEL (ppm)	STEL (Mg/M3)	CEIL (ppm)	CEIL (Mg/M3)	% by Weight
Propylene	115-07-1	500	n/ap	n/ap	n/ap	n/ap	n/ap	96-100
<b>Toxicity values of the hazardous ingredients</b>	Propylene LD50 Not applicable Propylene LC50 Not available							

**Section 4. Physical Data**

Physical state and appearance	Gas. Colorless.
Odor	Weak gassy hydrocarbon odor.
pH (1% soln/water)	Not available.
Odor threshold	5000 ppm
Evaporation rate	Not applicable.
Freezing point	-185°C (-301°F)
Boiling point	-47.7°C (-53.9°F)
Specific gravity	0.609 (Water = 1)
Volatility	100% (%/vol)
Vapor density	1.4 (Air = 1)
Vapor pressure	Not available.
Water/oil dist. coeff.	Not available.
Solubility	Insoluble in cold water.
Molecular Weight	Not available
Melting Point	-185°C (-301°F)
Density	Not available.

**Section 5. Fire and Explosion Data**

Auto-ignition temperature	460°C (860°F)
Flash points	-108.15°C (-162.5F)
Flammable limits	LOWER: 2% UPPER:11.1% Propylene
Extinguishing Media	Use dry chemical, CO2, water spray or foam.
Special fire fighting procedures	Do not extinguish fire if source of gas cannot be safely turned off. If flames are accidentally extinguished explosive re-ignition may occur if ignition sources are not controlled. Be alert to container rupture potential if tanks are involved in a fire. Fullface positive pressure, self-contained, breathing apparatus and appropriate protective clothing should be worn for all indoor and significant outdoor fires.
Flammability	Product is an extremely flammable gas. May be ignited by contact with heat, sparks or open flame. Gas may accumulate in confined spaces. Gas can travel considerable distances to ignition sources and cause a flash fire.  <b>Remark</b> No additional remark.
Risks of explosion	This material is sensitive to static discharge. This product is not sensitive to mechanical impact.  <b>Remark</b> No additional remark.

**Section 6. Reactivity Data**

**Stability** This product is stable.

**Hazardous decomp. products** Carbon monoxide, carbon dioxide and irritant fumes and gases.

**Reactivity** Incompatible Materials: oxidizing materials, halogen compounds (eg-chlorine)  
Hazardous Polymerization: will not occur under normal conditions.

**Remark**

No additional remark.

**Section 7. Toxicological Properties**

**Routes of entry** Inhalation. Eye contact. Skin contact.

**OSHA PEL** See Section 3 for ACGIH TLVs

**Toxicity to animals** Propylene LD50 Not applicable  
Propylene LC50 Not available

**Remark**

No additional remark.

**Chronic effects** Propylene is known to cause mutagenicity.

**Remark**

No additional remark.

**Acute effects** Irritancy: Contact with rapidly expanding or liquified gas may result in skin or eye irritation and/or frostbite.  
Sensitizing capability: No effects known.

**Ingestion** Not applicable.

**Skin** Contact with rapidly expanding or liquified gas may result in irritation and/or frostbite.

**Eyes** Contact with rapidly expanding liquified gas may cause irritation and/or frostbite.

**Inhalation** This product is classified as a simple asphyxiant. Adverse health effects occur as a result of the displacement of oxygen. Central nervous system depression can occur if product is present in concentrations that will reduce the oxygen content of air below 18% (vol). Symptoms may include headache, lightheadedness, drowsiness, disorientation, vomiting and seizures. Unconsciousness and death may occur with severe oxygen deprivation.

**Remark**

Recent studies suggest light hydrocarbons in high concentrations may produce narcotic effects including dizziness, headache and fatigue. These studies have yet to be confirmed.

**Synergistic materials** None known.

**Section 8. Preventive Measures**

**Waste disposal** If permissible under applicable federal, state/provincial and local requirements, allow complete dissipation. Vent gas to safe location, preferably by burning in a flare. If gas cannot be flared special care must be taken to ensure complete dissipation of the gas below its flammable limits.

**Storage** Comply with all applicable regulations for the storage and handling of compressed gases and flammable materials.  
Store product below the flash point and keep away from all ignition sources. Secure containers.

**Ventilation** Local and general ventilation must be provided to maintain airborne concentrations below lower explosive limits and to maintain adequate oxygen levels. Ventilation systems must be designed in accordance with approved engineering standards. Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems.

**Continued on Next Page**

**Spill and leak** Evacuate all unnecessary personnel. Control release of gas. Don full-face, positive pressure, self-contained breathing apparatus and appropriate clothing. If product is on fire refer to Section 5 Fire and Explosion Data. If product is leaking but is not on fire, downwind evacuation should be considered. Flashback may occur along the gas trail.

**Section 9. Classification/Regulatory Information**

**DOT/TDG Road/Rail** PRIMARY CLASS: 2.1  
SUBSIDIARY CLASS: NOT APPLICABLE



PETROLEUM GASES, LIQUEFIED, 2.1 UN1075 DOT  
PETROLEUM GASES, LIQUEFIED, 2.1 UN1075 DOT

**Remark**  
102 Add "SPECIAL COMMODITY" must be marked on documents if shipped by rail.

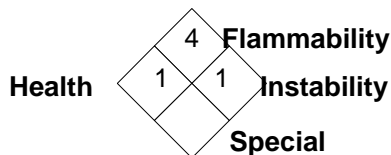
**WHMIS** WHMIS CLASS A: Compressed gas. WHMIS CLASS B-1: Flammable gas.



**Remark**  
No additional remark.

**Other** TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory. Domestic Substances List (DSL): This product is listed on the DSL.  
**Refer to federal, state/provincial, and local legislation for further requirements.**

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



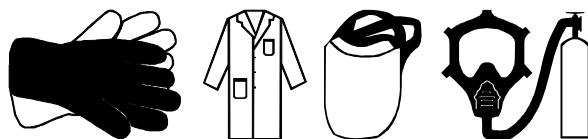
**Section 10. Protective Clothing**

**Eye** Protective equipment must be provided to prevent eye contact with rapidly expanding gas.

**Skin** Protective equipment must be provided to prevent skin contact with rapidly expanding gas.

**Respiratory** If engineering controls and work practices are not effective in controlling exposures, and maintaining oxygen levels, then full face, positive pressure, self contained breathing apparatus or air-line device must be used. Wear NIOSH approved respiratory protection adequate for the expected concentration of the substance in the air.

**Other** As required by the situation according to your companies policies and procedures. Contact your supervisor for direction.



**Section 11. Preparation Information**

**References** -SAX, N.I. Dangerous Properties of Industrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. CCOHS (Cheminfo) Threshold Limit Values and Biological Exposure Indices (ACGIH)

**MSDS Status** Jan 2001: added name Propane. Added propane TWA.

**Acronyms:** TLV = Threshold Limit Value N/AP = Not applicable N/AV = Not Available COC = Cleveland Open Cup PMCC = Pensky Martens Closed Cup

**Validated by Health & Safety Department on 5/16/2008.**

**Verified by Health & Safety Department.**

**Supersedes: 03/19/2003**

**Printed 5/23/2008.**

**Emergency Phone # Canada: 403-262-2111**

**Emergency Phone # USA: Chemtrec 1-800-424-9300**

*While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.*