MSDS *Material Safety Data Sheet*: Propane

DPI
Dufour Petroleum LP
An ENBRIDGE Company

SECTION I CORPORATE IDENTIFICATION

Emergency telephone number: 800-424-9300 (Chemtree)

DPI., P.O. Box 1184, Petal, MS 39465 **General Information:** (601) 583-9991

SECTION II PRODUCT/INGREDIENT

Trade Name	CAS Registry No.	NFPA Hazard Rating (0=Least, 4=Extreme)
Propane	74-98-6	1 Health 4 Fire 0 Reactivity

DOT Bill of Lading	U.S. DOT Classification	I.D. No.
Liquefied Petroleum Gas, 2.1, UN1075, "NONCOR"	Flammable Gas	UN1075

SECTION III HAZARD COMPONENTS

Chemical Name	OSHA TWA	ACGIH TLV	Other Limits
Propane	1000 pp	Asphyxiant	

Common Name(s)
Dimethylmethane
Liquefied Petroleum Gas
Liquefied Compressed Gas

Formula
$CH_3CH_2CH_3$

NOTE: May include Ethyl Mercaptan (0.1%) as an odorant per required applicable regulations.

SECTION IV PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point
-44° @ 14.70 PSIA

Specific Gravity (H_20 = 1)
0.590

Vapor Pressure
190 - 208 PSI

Melting Point
-360° F

Vapor Density
1.56

Evaporation Rate (butyl acetate = 1)
Very Rapid

Solubility in Water
Insoluble

% Volatile by Volume
100%

Appearance and Odor
Colorless, odorless gas unless odorant is added

Other

SECTION V FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used)
-156° Fahrenheit

Flammable Limits
LEL - 2.0 UEL - 9.5

Extinguish Media
Dry chemical, $C0_2$ or foam
Water spray (fog) can be used to dissipate vapors.

Special Fire Fighting Procedures
Gas fires should not be extinguished unless the gas flow can be stopped immediately. Shut off gas source and allow the fire to burn itself out. If the source cannot be shut off immediately, all equipment and surfaces exposed to the fire should be cooled with water to prevent overheating, flashbacks, or explosions. Control fire until gas supply can be shut off. Firemen must use proper protective equipment including respiratory apparatus to protect against hazardous combustion products/oxygen deficiencies.

Unusual Fire and Explosion Hazards
The gas releases flammable vapors at well below ambient temperatures and readily forms flammable mixtures with air. Exposed to an ignition source, it will burn in the open or be explosive in confined spaces. Its vapors are heavier than air and may travel long distances to a point of ignition and then flash back. Alkane/chlorine gas mixtures have produced explosions.

SECTION VI REACTIVITY DATA

Stability
Stable

Conditions to avoid
Heat, sparks, open flames

Materials to Avoid
Strong acids, alkalies, and oxidizers

Hazardous Decomposition By-products
Burning may result in sulfur dioxide and sulfur trioxide fumes, smoke, carbon monoxide and carbon dioxide

Hazardous Polymerization
Will not occur

SECTION VII HEALTH HAZARD DATA

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes

Summary of Acute Hazards
Inhalation may produce mild intoxication, drowsiness, or loss of coordination. High concentrations produce intoxication followed by loss of consciousness, asphyxiation, and death.

Carcinogenicity:	NTP?	IARC Monographs	OSHA Regulated	ACGIH
No	No			

Signs and Symptoms of Exposure

Inhalation Exposure may produce rapid breathing, headache, dizziness, visual disturbances, muscular weakness, tremors, narcosis, unconsciousness, and death depending on concentration and time of exposure. q

Skin Exposure to liquid could result in frostbite symptoms.

Medical Conditions Generally Aggravated by Exposure

SECTION VII HEALTH HAZARD DATA (cont.)

Caution is recommended for personnel with pre-existing central nervous system disorders. Personnel with pre-existing chronic respiratory diseases should refrain from breathing this material.

Emergency and First Aid Procedures

Eyes Vapors are not expected to present an eye irritation hazard. If contacted by liquid/solid, immediately flush the eye(s) gently with warm water for at least 15 minutes. Seek medical attention if pain or redness persist.

Inhalation Immediately move personnel to area of fresh air. For respiratory distress, give air oxygen, or administer CPR (Cardiopulmonary Resuscitation). If necessary, obtain medical attention if breathing difficulties continue.

Skin Frozen tissues should be flooded or soaked with warm water (105-115 Deg. F). Do not use hot water! Cryogenic burns which result in blistering or deeper tissue freezing should be promptly seen by a physician.

Ingestion DO NOT induce vomiting. Seek medical attention immediately.

SECTION VIII SPILL AND DISPOSAL

Precautions if Material is Spilled or Released

Eliminate all potential sources of ignition. Evacuate all non-essential personnel to an area upwind (at least 1/2 mile in all directions if tanks or tank cars are involved in fire). Stop source of release with non-sparking tools before putting out any fire. Ventilate enclosed areas to prevent formation of flammable or oxygen-deficient atmospheres. Water spray may be used to reduce vapors. Closed systems form white frost that does not readily disperse. Avoid vapor cloud even with proper respiratory equipment.

Waste Disposal Method

Releases are expected to cause only localized non-persistent environmental damage. Waste mixtures containing these gases should not be allowed to enter drains or sewers where there is danger of their vapors becoming ignited. When it becomes necessary to dispose of these gases, it is preferable to do so as a vapor. Unused product may be used as an auxiliary fuel or disposed by burning in a properly designed flare or incinerator. Venting of gas to the atmosphere should be avoided. Defective, empty, or partially used portable containers should be returned to the supplier with appropriate tags.

SECTION IX PROTECTIVE EQUIPMENT AND CONTROL MEASURES

Respiratory Protection (specify type)

Use supplied air or self-contained breathing equipment in confined or enclosed spaces.

Ventilation

Local Exhaust Ventilate to avoid accumulation of explosive vapors.
Special No smoking or open lights.
Mechanical (General) Use explosion-proof equipment and non-sparking tools in areas where explosive vapors may form.

Protective Gloves

Prevent potential skin contact with cold liquid, solid, vapors. Use insulated, impervious plastic or neoprene coated gloves.

Eye Protection

Use chemical-type goggles and face shield when handling liquefied gases.

Other Protective Clothing or Equipment

Appropriate impervious clothing for prolonged or repeated exposures.

Work/Hygienic Practices

Avoid direct contact with liquid.

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