

Material Safety Data Sheet

Propane (With Odorant)

Section I

Supplier's Name: EIL Propane Supply Inc.

Address: 20 Crossways Park N., Suite 302 Woodbury, NY 11797-2007

Chemical Name: Liquefied Petroleum Gas or Propane (With Odorant)

Formula: C_3H_8

CAS Registry No.: 74-98-6

Chemical Family: Hydrocarbon

Synonyms: HD-5 Propane, Commercial Propane, LP-Gas, LPG

Product Information: (516)921-9180

Emergency Contact (CHEMTREC): 1-800-424-9300 or 1-202-483-7616

Section II

Composition and Information on Ingredients

100% Propane Fuel (Odorized) contains hazardous components.

Propane (CAS 74986) > 90.0% - Asphyxiant

Ethane (CAS 74840) < 10.0% - Asphyxiant

Propylene (CAS 115071) < 5.0% - Asphyxiant

Butane (CAS) < 2.5%

Radon (CAS 14859677)

Ethyl Mercaptan Odorant ** 0-50ppm

****Warning:** The intensity of ethyl mercaptan stench (its odor) may fade due to chemical oxidation, adsorption or absorption in the presence of rust, iron, air or moisture. A sniff test for odor should be conducted whenever propane is transferred from one container to another. Some people may not be able to smell the ethyl mercaptan stench, due to age or other physiological condition, from long exposure, or due to the presence of other odors which may mask the stench. While generally effective ethyl mercaptan may not impart warning of the presence of propane in every situation. Familiarize yourself, your employees and your customers with this warning. For more information please contact your sales representative.

WARNING: DANGER! Extremely flammable. Compressed Gas Asphyxiant in high concentrations. Contact with liquid causes burn similar to frost bite. OSHA permissible exposure limit (PEL) 1000 ppm for eight hour workday.

Hazardous Mixtures: Air with 2.15 to 9.60 percent propane

Section III**Physical and Chemical Properties**

Appearance and Odor: Vapor and Liquid are colorless and odorless. Product may contain an odorant (Commercial gas odor).

Boiling Point (760 mmHg): -44 deg. F
 Specific Gravity (Water =1): 0.58
 Vapor Pressure at 100 deg. F: 205 psig
 Volatiles by Volume (%): 100
 Soluble in Alcohol, ether and hydrocarbons

Melting Point: NA
 Vapor Density (Air =1): 1.56
 Solubility in Water: Slight
 Evaporation Rate: Gas at ambient temp.

Section IV**Fire and Explosion Hazard Data****Flammable Properties**

Flash Point: 156 deg. F. Classification: Flammable Gas UN 1075
 Flammable Limits: 2.15 (LFL) to 9.60 (UFL) % by volume in air
 Autoignition Temperature: 874 deg. F.
 Extinguisher Media: Stop flow of gas. Water Spray, Class A-B-C or BC fire extinguisher at incipient stages of fire.

NFPA:	Health Hazard	1	Slightly toxic
	Fire Hazard	4	Extremely Flammable
	Reactivity	0	Stable

WARNING: This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches.

Special Fire Fighting Procedures: Stop flow of gas. Stay up-wind of leak or source. Use water stream to keep fire exposed containers cool. Use water spray to disperse liquid or vapor. If ignition has occurred and no water available, tank metal may weaken from overheating. Evacuate area in all directions. If gas has not ignited, DO NOT enter vapor cloud. Liquid or vapor may be dispersed by water spray or flood. If leak is in any enclosed or confined space. DO NOT enter space without proper protective equipment, including self-contained breathing apparatus, and training. Petroleum gases are heavier than air and travel along the ground or into drains to possible distant ignition sources, causing an explosive flashback.

Decomposition Products under Fire Conditions: Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, in case of incomplete combustion or when used as engine fuel.

"Empty" Containers. WARNING- "Empty" containers contain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Section V**Health Hazard**

Toxicity Summary: Low hazard- anesthetic and asphyxiant in high concentration. OSHA P.E.L. 1000 ppm ACGIH TLV 1000 ppm

Exposure Symptoms:

Inhalation: 1%- no symptoms; 10%- eye, nose and respiratory tract irritations ranging from dizziness to anesthesia and respiratory arrest. This material can act as a simple asphyxiant by displacement of air. Other signs and symptoms may include rapid breathing, incoordination, rapid fatigue, excessive salivation, disorientation, headache, nausea, and vomiting. Convulsions, loss of consciousness, coma and/or death may occur if exposure to high concentration continues.

Skin Contact: The gas is not irritating to the skin. However, skin contact with liquid may cause severe freezing burns.

Skin Absorption: None

Eye Contact: The gas phase is not expected to cause eye irritation. However, the liquid may cause freezing burns

Ingestion: NA

Special Chronic Effects: None known

First Aid:

Inhalation: Signs or symptoms as described occur, remove to fresh air. Guard against self-injury. Apply respiratory support (artificial respiration) if necessary. Seek medical aid.

Skin: Treat liquid contact as a burn. Flush skin immediately with fresh running water. If burn occurs seek medical aid.

Eyes: Treat liquid contact as a burn. Flush eyes immediately with fresh running water for at least 15 minutes. Seek medical aid.

Ingestion: NA

Notes to Physician: None

Section VI**Reactivity Data**

Conditions Contributing to Instability: Stable

Incompatibility: Strong Oxidants, mixing with air except at burner

Hazardous Decomposition Products (thermal unless specified): CO, CO₂

Conditions Contributing to Hazardous Polymerization: None

Section VII**Spill or Leak Procedures**

Steps to be taken in case material is released: Keep public away. Shut off gas supply. Eliminate source of ignition. Ventilate the area. Disperse with water spray. Contact between skin and these gases in liquid form can cause freezing of the tissue similar to thermal burn.

Waste Disposal Method: Controlled burning at approved facilities.

Section VIII**Special Protection Information**

Respiratory Protection: Stay out of gas or vapor (because of fire hazard)

Ventilation Requirements: For confined space entry, follow approved safety practices. Due regard should be given to explosive limits and oxygen concentration.

Special Protective Equipment:

Respiratory - follow safe confined space entry procedures.

Eyes - Chemical safety goggles should be wear at all times while working with this product.

Gloves - Recommended when handling product.

Apparel - Cover all parts of body if possible. Static electricity and fire protective garments recommended.

Engineering Controls - Use material only in well ventilated areas.

Section IX**Special Handling Precautions**

Precautions to be taken when handling and storing: Keep containers away from heat sources and store in upright position. Use only in well ventilated areas. Store away from strong oxidizing materials. Do not drop containers. Keep container valves closed when not in use. Install protective caps and plug container service valve when not connected. Check for damage to containers.

Eliminate sources of ignition, use explosion proof motors and use spark proof tools in areas where product is used.

Before entry into confined space that may have contained hazardous material, determine concentration and take appropriate measures for personal protection. Material presents a hazard that may require personal protective equipment for entry.

This product has been odorized in order to aid in its detection in case of a leak or accidental discharge. During shipping or storage of an odorized material, alteration of the odorant and subsequent reduction in its effectiveness may occur.

Odorants are reactive. Rust and scale in storage containers and pipe may significantly reduce an odorant's effectiveness. For this reason, storage containers must be free of rust and scale. Whenever an empty cylinder is filled, it must be properly purged and conditioned to remove air and water and to deactivate sites for oxidation of the odorant. Underground pipelines should also be checked periodically for leaks.

Prolonged exposure to an odorant or other strong smells in the environment may reduce an individual's ability to detect the odorant. People with an impaired ability to detect odors due to colds, allergies, smoking, injuries, etc., must be especially cautious.

Special precautions should be taken when entering or handling equipment in some types of gas service because of possible radioactive contamination. All equipment should be checked for radioactivity or opened to the atmosphere and have forced ventilation applied for at least four hours prior to entry or handling. Avoid direct skin contact with any surface. Avoid generation of dust, smoke, fumes, etc. in the work area, or if they can not be avoided, a tested and certified radionuclide dust respirator should be worn. Smoking, eating, or drinking, should be prohibited when working with the equipment. Employees should wash thoroughly with soap and water and discard contaminated clothing after entering or handling the equipment.

Section X**Toxicological Information**

OSHA Carcinogen Classification (29 CFR 1910): Not listed/applicable

U.S. Department of Health (21 CFR 184.1655): Generally recognized as safe (GRAS) as a direct human food ingredient when used as a propellant, aerating agent and gas as defined in section 170.3 (c) (25)

This product contains butane. An atmospheric concentration of 100,000 ppm (10%) butane is not noticeably irritating to the eyes, nose or respiratory tract, but will produce slight dizziness in a few minutes of exposure. No chronic systemic effect has been reported from occupational exposure.

This product contains isobutane. Isobutane has been shown to increase airway resistance by bronchioconstriction and decrease pulmonary compliance and tidal volume (difficulty in breathing). Air containing 27% isobutane was found to decrease respiratory rate and proved to be fatal to rats.

This product may contain detectable but varying quantities of the naturally occurring radioactive substance radon 222. The amount in the gas itself is not hazardous, but since radon rapidly decays ($t_{1/2} = 3.82$ days) to form other radioactive elements including lead 210, polonium 210, and bismuth 210, equipment may be radioactive. The radon daughters are solids and therefore may attach to dust particles or form films and sludge in equipment. Inhalation, ingestion or skin contact with radon daughters can lead to the deposition of radioactive material in the lungs, bone, blood, forming organs, intestinal tract, kidney and colon. Occupational exposure to radon and radon daughters has been associated with an increased risk of lung cancer in underground uranium miners. Follow the Special Precaution contained in this document.

Section XI**Disposal Considerations**

This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by USEPA under RCRA (40CFR261) or other state and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous disposal facility.

Section XII**Dot Labeling Information (49 CFR 100-199)**

Proper Shipping Name: Liquefied Petroleum Gas

Identification No.: UN 1075

Hazardous Classification: Flammable Gas

Label(s) Required: Flammable Gas