

**Material Safety Data Sheet (MSDS)
For
Propane (With Odorant)**

Commercial Grade Propane (Odorized)

24 Hour Emergency Assistance PERS, Inc. Accidents Spills or Leaks Only 1-800-633-8253	Superior Propane, Inc. 600 E. Frank Way Williams, AZ 86046 1-866-34-GO-GAS
--	---

Section 1 – Identification

Product	Propane	Chemical Family	Paraffinic Hydrocarbon
Synonyms	HD-5, Propane LP-Gas, LPG	Chemical Formula	C3H8

Section 2 – Ingredients

Component	CAS Number	Percent
Ethane	74-84-0	0-5.0
Propane	74-98-6	87.5-100
Propylene	115-07-1	0-5.0
Butane	106-97-8	0-2.5
Ethyl Mercaptan	75-08-01	0-50 ppm

Section 3 – Physical Data

Boiling Point	-44 F.(-42C)
Vapor Pressure	189-208 psig @ 100 degrees F
Specific Gravity	.508 (H2O=1)

Vapor Density	1.52 (Air =1)
Solubility in Water	Slight, 6.1% by volume 17.8C
Appearance	Colorless
Odor	Odorless, in natural form Mercaptan odorant added*

***Odorant Warning**

Odorant is added to aid in detection of leaks. One common odorant is ethyl mercaptan, CAS No. 75-08-1. Odorant has a foul, skunk like odor. The odorant is effective in most instances, but not everyone can smell the odor. The ability of people to detect odors varies widely. Also, certain chemical reactions with material in the propane system can reduce the propane odor level. No odorant will be 100% effective in all circumstances. If odor level appears to be weak, notify propane supplier immediately.

Section 4 – Reactivity

Stability	Stable
Hazardous Polymerization	Not expected to occur
Conditions to Avoid	Keep materials away from high heat, sparks, open flame, strong oxidizing agents
Hazardous Decomposition	Combustion may produce carbon monoxide and other harmful substances

Section 5 – Fire and Explosion Data

Flash Point	-156 F. (estimated)
Auto Ignition Temperature	842 F.
Flammability Limits	Lower 2.1% Upper 9.5%
Extinguishing Media	Dry Chemical, Water Spray, Foam, CO2
Fire Fighting Procedure	Evacuate area. Shut off source of gas, if possible. Notify Fire Department. Remain up-wind of vapors. Allow only trained, properly

	protected personnel in area. Shut off source of gas, if possible. Allow fire to burn itself out after gas flow is shut off. If gas flow cannot be shut off, do not extinguish fire. Allow fire to burn itself out using high volume water supply to cool heat-exposed pressure containers and near by equipment. Approach a flame enveloped container from the side, never the head ends. Use extreme caution when applying water to a container which has been exposed to heat or flame for more than a short time. For uncontrollable fires and when flame is impinging on container, withdraw all personnel and evacuate vicinity immediately.
Usual Fire & Explosion Hazards	Firefighters should wear self-contained breathing apparatus in the positive pressure mode with full face piece, when there is a possibility of exposure to smoke, fumes or hazardous decomposition products. Uncontrolled vapors spread rapidly, are heavier than air and are extremely flammable.

Section 6 – Occupational Exposure Limits

ACGIH (American conference of Governmental Industrial Hygienists) List as a simple Asphyxiate.
OSHA (Occupational Safety and Health Administration) TWA 1000 PPM

Section 7 – Health Information

Inhalation	Exposure may produce rapid breathing, headache, dizziness, disturbance, muscular weakness, tremors, narcosis, unconsciousness, and death, depending on duration and concentration of exposure.
Eye Contact	This gas is non-irritating, but direct contact with liquefied, pressurized gas or frost particles may produce severe and possible permanent eye damage from freeze burns.
Skin Contact	This material is not expected to be absorbed through the skin. Non-irritating; but solid and liquid forms of this material and pressurized gas can cause freeze burns.
Ingestion	Solid and liquid forms of this material and the pressurized gas can cause freeze burns.
Special Effects	Personnel with pre-existing chronic respiratory diseases should avoid exposure to this material.

Section 8 – Emergency & First Aid Procedures

Inhalation	Immediately move personnel to fresh air. For respiratory distress, give air, oxygen, or administer CPR (cardiopulmonary resuscitation), if necessary. Obtain medical attention if breathing difficulties continue.
Eye Contact	Vapors are not expected to present an eye irritation hazard. If contacted by liquid/solid, immediately flush eye(s) gently with warm water for at least 15 minutes. Seek medical attention if pain or redness persists.
Ingestion	Induce vomiting with warm water (qt.) only if patient is conscious. Immediately obtain medical attention.

Section 9 – Employee Protection

Respiratory	For excessive gas concentrations, use only NIOSH/MSHA self-contained breathing apparatus.
Eye	Use chemical-type goggles and face shield when handling liquefied gasses. Safety glasses and or a face shield are recommended when handling high pressure cylinders and piping system and whenever vapors are discharged.
Skin	Prevent potential skin contact with cold liquid/solid/vapors. Use insulated, impervious plastic or neoprene coated canvas gloves and protective gear (apron, face shield, ect.) to protect hands and other skin areas.

Section 10 – Environmental Protection

Effect	Avoid uncontrolled releases of this material. Liquid releases will have possible effect on plant and animal life. Large liquid release will quickly vaporize to produce a large vapor cloud. Vapor cloud is both a fire and asphyxiation hazard.
Spill or Leak	Product is extremely flammable. Vapor is heavier than air and may collect at lower levels. If there is a leak but no fire, do not ignite the escaped gas. Eliminate all ignition sources. Water spray can be used to help dilute vapor concentration in air. If possible, remove leaking container to safe area.
Disposal	Disposal of gas in accordance with applicable laws and regulations. Vent vapor in safe location and insure that gas dissipates below the lower flammable limit. Controlled burning is preferred.

Section 11 – Special Protection

Store and use cylinders and tanks in a well ventilated area, away from heat and sources of ignition. No smoking near storage or use. Follow standard procedures for handling cylinders, tank, loading/unloading. Fixed storage containers must be grounded and bonded during transfer of product.

Section 12 – Regulatory Information

DOT Hazard Class	2.1 (Flammable Gas)
DOT ID No (UN/NA)	UN 1075
DOT Shipping Name	Liquefied Petroleum Gas
IMO Shipping Name	Propane / Butane
IMO Hazard Class	2.1
IMO Label	Flammable Gas
SARA Title III Information	This product may contain may contain 1.0% propylene. This is subject to the reporting Section 313.
Hazard Category for Sec 311/312 Reporting	Immediate (acute) health hazard
Fire Hazard	Sudden release of pressure hazard
TSCA Status	All components of this product are listed on the TSCA inventory. The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the data hereof may suggest notification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shell make his own determination of the suitability of the material for his particular purpose.
United Pacific Energy	

Proposition 65	
Public Warning	<p>The Safe Drinking Water and Toxic Enforcement Act 1986, commonly referred to as Proposition 65, requires the Governor to publish a list of chemicals “known to the State to cause cancer, birth defects, or reproductive harm.” It also requires California businesses to warn the public quarterly of potential exposure to these chemicals which result from their operations. Liquefied Petroleum Gas (propane), in its original state, contains radon and benzene, chemicals “known to the State of California to cause reproductive harm.” The benzene and toluene are destroyed when Propane is burned. Radon does not burn but is released with the combustion by-products. Radon and propane combustion by-products can generally be removed through appliance vents and other exhaust systems. When propane is processed in some dehydrators, benzene and toluene can be released to the environment. A warning odorant is added to propane so that leaks of unburned gas can be quickly detected. If gas odor is detected, your supplier should be contacted promptly.</p>