

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 00003
Product Name: Propane
Company Name: Gas Innovations
 18005 E. Hwy 225
 La Porte, TX 77571
Web site address: www.gasinnovations.com **Phone Number:** +1 (281)471-2200
Emergency Contact: 3E (within United States) +1 (866)303-2640
Information: Infotrac (outside of United States) +1 (352)323-3500

2. HAZARDS IDENTIFICATION

Flammable Gases: Category 1
Gas Under Pressure: Liquefied gas

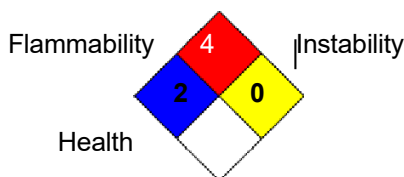
Symbol:



GHS Signal Word: Danger

GHS Hazard Phrases: H220 - Extremely flammable gas.
 H280 - Contains gas under pressure; may explode if heated.
 OSHA-H01 - May displace oxygen and cause rapid suffocation
 CGA-HG01 - May cause frostbite
 CGA-HG04 - May form explosive mixtures with air
GHS Precaution Phrases: P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P202 - Do not handle until all safety precautions have been read and understood.
 P271 - Use only outdoors or in a well-ventilated area.
 P280 - Wear eye protection, face protection, protective gloves, protective clothing.
 P308+P313 - If exposed or concerned: Get medical advice/attention.
 P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.
GHS Response Phrases: P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
 P381 - Eliminate all ignition sources if safe to do so.
 P302 - IF ON SKIN: Thaw frosted parts with lukewarm water. Do not rub affected area, Get immediate medical advice/attention.
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
GHS Storage and Disposal Phrases: P410+403 - Protect from sunlight when ambient temperature exceeds 52°C/125 °F and store in well-ventilated place.
 CGA-PG05 - Use a back flow preventive device in the piping
 CGA-PG06 - Close valve after each use and when empty
 CGA-PG10 - Use only with equipment rated for cylinder pressure
 CGA-PG14 - Approach suspected leak area with caution
 CGA-PG21 - Open valve slowly

Hazard Rating System:



NFPA: Special Hazard

Potential Health Effects (Acute and Chronic): Propane is nontoxic but can act as a simple asphyxiant by displacing air. Symptoms of asphyxia include rapid respirations, dizziness and fatigue. Contact with the liquid phase or with the cold gas escaping from cylinder may cause frostbite.

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. Propane is nontoxic but can act as a simple asphyxiant by displacing air.

Skin Contact: May be harmful if absorbed through the skin. May cause skin irritation.

Eye Contact: May cause eye irritation.

Ingestion: May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
74-98-6	Propane	100 %

4. FIRST AID MEASURES

Emergency and First Aid Procedures: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

In Case of Inhalation: If breathed in, move a person into fresh air and keep at rest in a position comfortable for breathing. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician.

In Case of Skin Contact: If frostbite or freezing occurs, immediately flush with plenty of lukewarm water (105-115°F; 41-46°C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Maintain skin warming for at least 15 minutes or until normal coloring and sensation have returned to the affected area. If skin irritation occurs, get medical advice/attention.

In Case of Eye Contact: Immediately flush your eyes with plenty of water for at least 15 minutes. Hold eyelids apart and flush eyes with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

In Case of Ingestion: Not expected to be a primary route of exposure.

5. FIRE FIGHTING MEASURES

Flash Pt:	Not Applicable
Method Used:	Not Applicable
Explosive Limits:	Lower level: 2.1%(Volume in air) Upper level: 9.5 % (Volume in air)
Autoignition Pt:	450 °C (842 °F)
Suitable Extinguishing Media:	Stop the flow of gas. If the flow cannot be stopped, let the fire burn out while cooling the cylinder and the surrounding areas using a water spray. Regular dry chemical, carbon dioxide.
Fire Fighting Instructions:	<p>Personnel may have to wear approach-type protective suits and positive pressure self-contained breathing apparatus. Firefighters' turnout gear may be inadequate. Cylinders exposed to fire may rupture with violent force. Extinguishing surrounding fire and keep cylinders cool by applying water from a maximum possible distance with a water spray. Apply water from a protected location or from a safe distance. Stay away from the ends of tanks.</p> <p>For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. Flammable gases may spread from a spill after the fire is extinguished and be subject to re-ignition.</p>
Flammable Properties and Hazards:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures:	Use proper personal protective equipment as indicated in Section 8.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Avoid release to the environment.
Steps To Be Taken in Case Material Is Released or Spilled:	<p>Forms explosive mixtures with air. Immediately evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Remove all sources of ignition if safe to do so. Reduce vapors with fog or fine water spray, taking care not to spread liquid with water. Avoid allowing water runoff to contact spilled material. Do not direct water at spill or source of leak. Shut off flow if safe to do so. Ventilate area or move container to a well-ventilated area. Flammable vapors may spread from leak and could explode if reignited by sparks or flames. Explosive atmospheres may linger. Before entering areas, especially confined areas, check the atmosphere with an appropriate device. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. For controlling larger flows, personnel may have to wear approach-type protective suits and self-contained breathing apparatus</p>

7. HANDLING AND STORAGE**Precautions To Be Taken
in Handling:**

Do not handle until all safety precautions have been read and understood. Avoid inhalation of vapor or mist. Do not eat, drink or smoke when using this product. Keep away from heat, sparks and flames. Keep away from sources of ignition - No smoking. Use spark-proof tools and explosion proof equipment. Use in a closed system. Secure the cylinder to prevent it from falling or being knocked over. Leak check the lines and equipment. Have an emergency plan covering steps to be taken in the event of an accidental release.

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving the cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder with its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. All electrical equipment in the storage areas should be compatible with the risk of a potentially explosive atmosphere.

**Precautions To Be Taken
in Storing:**

Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Cylinders should be stored and used in dry, well-ventilated areas away from sources of heat or ignition. Store away from oxidizers. Keep separated from incompatible substances.

Other Precautions:

When handling a product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; stored and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
74-98-6	Propane	PEL: 1000 ppm; 1800 mg/m ³	TLV: (2500 ppm)	NIOSH: 1000 ppm. 1800 mg/m ³

**Respiratory Equipment
(Specify Type):**

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Eye Protection:

Wear safety glasses when handling cylinders, vapor-proof goggles and a face shield during cylinder change out or whenever contact with product is possible. Select eye protection in accordance with OSHA 29 CFR 1910.133. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Gloves:

Wear appropriate gloves to prevent skin exposure.

Other Protective Clothing:

As needed for welding, wear hand, head and body protection to prevent injury from radiation and sparks.

**Engineering Controls
(Ventilation etc.):**

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility, and a safety shower is recommended.

**Work/Hygienic/Maintenance
Practices:**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States:	[X] Gas	[] Liquid	[] Solid
Appearance:	Colorless		
Odor:	Odorless Stenchant often added.		
Specific Volume:	0.531 m ³ /kg, 8.5 ft ³ /lb. @ 1 atm, 21.1°C.		
Solubility in Water:	75 mg/l		
Freezing Point:	-188 C (-306 F)		
Boiling Point:	-42.04 °C		
Decomposition Temperature:	NA		
Autoignition Pt:	450 °C (842 °F)		
Flash Pt:	Not applicable for gases		
Method used:	Not Applicable		
Explosive Limits:	Lower level: 2.2% (Volume in air)	Upper level: 9.5% (Volume in air)	
Specific Gravity (Water = 1):	1.858 kg/m ³ at 21.1 °C		
Density:	0.506 -0.583 g/cm ³ at 15°C		
Bulk Density	NA		
Vapor Pressure (vs. Air or mm Hg):	109 PSI at 21.1 C (70.0 F)		
Vapor Density (vs. Air = 1):	1.55		
Evaporation Rate:	NA		
Saturated Vapor Concentration:	NA		
Viscosity:	NA		
pH:	NA		
Percent Volatile:	CO		
VOC / Volume:	NA		
Particle Size:	NA		
Heat Value:	NA		
Corrosion Rate:	NA		
Molecular Formula:	C ₃ H ₈		
Molar mass:	44.11g/mol		

10. STABILITY AND REACTIVITY

Reactivity:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide.
Stability:	Unstable [] Stable [X]
Conditions To Avoid - Instability:	Heat, flames and sparks. No smoking.
Incompatibility Materials to Avoid:	Oxidizing agents.
Hazardous Decomposition or Byproducts:	High temperatures and fire conditions can result in the formation of carbon monoxide and carbon dioxide. Other decomposition products of normal operation originate from the volatilization reaction or oxidation of the materials being worked.
Possibility of Hazardous Reactions:	Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	Inhalation - Gas > 20000 ppm
Epidemiology:	No data available.
Teratogenicity:	No data available.
Reproductive Effects:	No data available.
Mutagenicity:	No data available.
Irritation or Corrosion:	No data available.
Chronic Toxicological Effects:	No data available.
Carcinogenicity:	NTP - No IARC Monographs - No OSHA Regulated - No


12. ECOLOGICAL INFORMATION

General Ecological Information:	Environmental: No information available. Physical: No information available.
Results of PBT and vPvB assessment:	No data available.
Persistence and Degradability:	The substance is readily biodegradable. Unlikely to persist.
Bio accumulative Potential:	Not expected to bioaccumulate due to the low log Kow (log Kow < 4).
Mobility in Soil:	Expected to have moderate mobility in soil.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:	Do not attempt to dispose of residual or unused quantities. Return container to supplier. Dispose of contents/containers in accordance with local/regional/national/international regulations. Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into areas where there is a risk of forming an explosive mixture with air
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14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):	
DOT Proper Shipping name:	Propane. <i>see also Petroleum gases, liquefied (UN1075).</i>
DOT Hazard Class:	2.1 FLAMMABLE GAS
UN/NA number:	UN1978 DOT Special Provisions (49 CFR172.102)
Labels:	
DOT Packaging Non-Bulk (49 CFR 173.xxx):	304
DOT Packaging Bulk (49 CFR 173.xxx):	314:315
Sea Transport:	
Transport document description (IMDG):	UN 1978 Propane, 2.1
UN-No. (IMDG):	1978
Proper Shipping Name (IMDG):	Propane
MFAG-No:	115
Air Transport:	
Transport document description (IATA):	UN 1978 Propane, 2.1
UN-No. (IATA):	1978
Proper Shipping Name (IATA):	Propane
Class (IATA)	2.1 - Gases : Flammable

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
74-98-6	Propane	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
74-98-6	Propane	TSCA: Yes - Inventory; CA PROP.65: No; CA TAC, Title 8: No; MA Oil/HazMat: Yes; MI CMR, Part 5: No; NC TAP: No; NJ EHS: Yes - 1594; NY Part 597: No; PA HSL: Yes - 1; SC TAP: No; WI Air: No

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
74-98-6	Propane	Canadian DSL: Yes; Canadian NDSL: No; Mexico INSQ: Yes - 1075; Australia ICS: Yes; New Zealand IOC: Yes; China IECSC: Yes; Japan ENCS: Yes - (2)-3; Korea ECL: Yes - KE-29258; Philippines ICCS: Yes; REACH: Yes - (R), (P); TW: Yes; VN(Draft): Yes;

16. OTHER INFORMATION

Revision Date: 07/30/2024
Additional Information About This Product: No data available.
NFPA Ratings:

0= Minimal Hazard
1= Slight Hazard
2= Moderate Hazard
3= Serious Hazard
4= Severe Hazard

Company Policy or Disclaimer:

The information, recommendations, and suggestions herein were compiled from reference material and other sources believed to be reliable. However, the SDS's accuracy or completeness is not guaranteed by Gas Innovations or its affiliates, nor is any responsibility assumed or implied for any loss or damage resulting from inaccuracies or omissions. Since conditions of use are beyond our control, no warranties of merchantability of fitness for a particular purpose are expressed or implied. This SDS is not intended as a license to operate under, or a recommendation to infringe on, any patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with the product .