



INTERNATIONAL INDUSTRIAL GASES LTD

Safety Data Sheet

LIQUEFIED PETROLEUM GAS (LPG)

Material Safety Data Sheet

LIQUEFIED PETROLEUM GAS (LPG)

Issue Date: 10-06-2026

Revision No: 01

Revision Date: 10-06-2026

Version: 01

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: LIQUEFIED PETROLEUM GAS (LPG)
Manufacturer's Registered Office: 146 Andul Road, Howrah - 711103, India
Manufacturer's Website: www.iigas.com · www.thegases.com
Telephone Number: (+91 033) 2668 4725

2. HAZARDS IDENTIFICATION

DANGER!

EMERGENCY OVERVIEW

Extremely flammable liquefied gas under pressure — flammable range approximately 1.8% to 9.5% in air.

Vapour is heavier than air — leaking gas collects at floor level, in drains and pits, and can travel along the ground to distant ignition sources.

Contact with liquid or rapidly expanding gas may cause frostbite (cold burns).

Odorised with ethyl mercaptan for leak detection.

Keep away from heat, sparks, open flames and other ignition sources. Keep at temperatures below 52°C / 125°F.

Appearance / State / Odor: Colorless | Physical State: Liquefied Compressed Gas | Odor: Characteristic odorant (ethyl mercaptan)

POTENTIAL HEALTH EFFECTS:

Principal Routes of Exposure: Inhalation

Inhalation: High concentrations act as a simple asphyxiant and have mild anaesthetic effects — drowsiness, dizziness, headache, narcosis, unconsciousness at very high concentrations.

Eyes: Contact with liquid or rapidly expanding gas may cause freezing injury.

Skin: Contact with liquid or rapidly expanding gas may cause frostbite (cold burns).

Ingestion: Not applicable for gases; liquid contact with mouth can cause freezing injury.

Chronic Effects: None known at occupational exposure levels.

Environmental Hazard: See Section 12 for additional Ecological Information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Volume %	Chemical Formula
Liquefied petroleum gas (lpg)	68476-85-7	100 (propane–butane mixture)	C ₃ H ₈ / C ₄ H ₁₀

4. FIRST AID MEASURES

Eye Contact: For frostbite from liquid contact, flush gently with lukewarm water and get medical attention.

Skin Contact: For frostbite, warm the affected area gently with lukewarm water — do not rub. Remove contaminated clothing carefully (it may be frozen to the skin). Get medical attention.

Inhalation: Move victim to fresh air immediately. If breathing has stopped, give artificial respiration. Seek immediate medical attention.

Ingestion: Not applicable under normal use.

Notes to Physician: Treat symptomatically. Do not give adrenaline or similar sympathomimetic drugs — hydrocarbon exposure may sensitise the heart to arrhythmia.

5. FIRE-FIGHTING MEASURES

Flammable Properties: Extremely flammable. Flammable range approximately 1.8% – 9.5% in air. Autoignition temperature ~450–540 °C (mixture-dependent).

Suitable Extinguishing Media: Stop the flow of gas if possible — extinguishing the flame without stopping the gas can create an explosive re-ignition hazard. Use water spray to cool cylinders and surroundings; dry chemical or CO₂ for small fires.

Specific Hazards: Vapour travels along the ground to ignition sources and flashes back. Cylinders exposed to fire may rupture violently (BLEVE). Continue to cool fire-exposed cylinders until well after flames are extinguished. Damaged cylinders should be handled only by specialists.

Protective Equipment for Firefighters: SCBA, pressure-demand, NIOSH approved or equivalent, and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Evacuate the area and eliminate all ignition sources immediately. Ventilate low-lying areas — vapour is heavier than air and collects in drains, pits and cellars. Monitor flammable-gas concentration. Stop the flow of gas or remove the cylinder outdoors if this can be done without risk. Return cylinder to IIGAS.

7. HANDLING AND STORAGE

Handling

Use only in well-ventilated areas away from ignition sources. Post “NO SMOKING — FLAMMABLE GAS” signs in storage and use areas. Keep LPG cylinders away from drains, basements and pits. Separate from oxygen and other oxidiser cylinders by at least 20 ft or a half-hour-fire-rated barrier 5 ft high. Check connections for leaks with soap solution — never with a flame. Store and handle in accordance with the Gas Cylinder Rules, 2016 and SMPV rules as applicable.

Use only in well-ventilated areas. Never attempt to lift a cylinder by its valve protection cap. Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for a short distance, use a cart designed to transport cylinders. Use equipment rated for cylinder pressure. Use a backflow preventive device in the piping. Never insert an object (e.g., wrench, screwdriver, pry bar) into valve cap openings — doing so may damage the valve and cause a leak.

Close the valve after each use and when empty. If a user experiences any difficulty operating the cylinder valve, discontinue use and contact the supplier. Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner’s written consent. Never strike an arc on a compressed gas cylinder or make a cylinder part of an electrical circuit.

For additional recommendations consult rules 18 & 20 of the Gas Cylinder Rules, 2016.

Storage

Protect from physical damage. Cylinders should be stored upright with the valve protection cap in place and firmly secured to prevent falling. Store in a cool, dry, well-ventilated area of non-combustible construction away from high-traffic areas and emergency exits. Keep at temperatures below 52°C / 125°F.

Full and empty cylinders should be segregated. Use a “First-In-First-Out (FIFO)” inventory system to prevent full cylinders from being stored for excessive periods. Always store and handle compressed gas cylinders in accordance with rule 21 of the Gas Cylinder Rules, 2016.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: ACGIH TLV-TWA: 1,000 ppm (aliphatic hydrocarbon gases, Group C₃–C₄).

Ventilation: Use explosion-proof local exhaust and general ventilation, including at floor level, to keep concentrations below the TLV and below 10% of the lower flammable limit.

Eye/Face Protection: Safety glasses; face shield when handling liquid.

Skin and Body Protection: Insulated gloves for liquid handling; work gloves and safety shoes when handling cylinders.

Respiratory Protection: SCBA for emergency or oxygen-deficient atmospheres.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless
Odor	Odorised (ethyl mercaptan)
Physical State	Liquefied compressed gas
Molecular Weight	44.1 (propane) / 58.1 (butane)
Boiling Point	-42 °C (propane) to -0.5 °C (butane)
Vapor Density	1.5 – 2.0 × air — heavier than air
Autoignition Temperature	~450 – 540 °C (mixture-dependent)
Flammability Limits in Air	Lower: ~1.8% — Upper: ~9.5%
Vapor Pressure	~110 psig (propane) @ 21 °C
Water Solubility	Negligible

10. STABILITY AND REACTIVITY

Stability: Stable.

Incompatible Products: Strong oxidisers (oxygen, chlorine, fluorine).

Conditions to Avoid: Heat, sparks, open flames, static discharge and all other ignition sources.

Hazardous Decomposition Products: Carbon monoxide from incomplete combustion.

Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

High concentrations act as an asphyxiant with mild anaesthetic effects. Hydrocarbon gases may sensitise the heart to adrenaline at very high concentrations. Contains no ingredient listed as a carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Will not bioconcentrate. Evaporates rapidly; photodegrades in the atmosphere.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods: Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container properly labelled, with any valve outlet plugs or caps secured and valve protection cap in place, to IIGAS for proper disposal.

14. TRANSPORT INFORMATION

DOT / ADR

Proper Shipping Name: Petroleum gases, liquefied

Hazard Class: 2.1

UN-Number: UN1075

Description: UN1075, Petroleum gases, liquefied, 2.1

Labels: 2.1 Flammable gas

15. REGULATORY INFORMATION

SARA 311/312 Hazard Categories

Acute Health Hazard: Yes **Chronic Health Hazard:** No **Fire Hazard:** Yes

Sudden Release of Pressure Hazard: Yes **Reactive Hazard:** No

Store, transport and handle in accordance with the Gas Cylinder Rules, 2016 and other applicable national / local regulations.

16. OTHER INFORMATION

General: Ensure all national / local regulations are observed.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should decide as to the suitability of the information for their purpose(s). The information contained in this document only covers the hazards presented by this material; it does not constitute a workplace risk assessment.