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## MATERIAL SAFETY DATA SHEET

Product Name:  
**LIQUID PETROLEUM GAS  
(L.P.G.)**

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Label 2.1 : flammable gas.

### IDENTIFICATION

**Chemical Name:** Liquid Petroleum Gas  
**Synonyms:** L.P.G., Handigas™, Propane  
**UN Number:** 1075  
**Poisons Schedule Number:** None allocated  
**EPG (Emergency Procedure Guide):** AS 1678 2-1-001  
**G.T. EPG. (Group Text. Emergency Procedure Guide):** AS 1678 2A2

**Use:** Heating fuel.

### HAZARDS IDENTIFICATION

**Dangerous Goods Class and Subsidiary Risk:** 2.1  
**HSNO Classification:** 2.1.1A

**Hazard Statement:** Extremely flammable gas.

**Precautionary Statements:** Read before label before use.  
Read material safety data sheet before use.  
Keep away from heat, sparks, open flames and hot surfaces.  
No smoking.  
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
Eliminate all ignition sources if safe to do so.  
Store in a well ventilated place.

### COMPOSITION

Ingredients	CAS Number	Proportion
Chemical Entity Liquefied Petroleum Gas	68476-85-7	100%

**FIRST AID MEASURES****Health Effects****Acute**

Swallowed: Not applicable due to high evaporation rate.

Eye: Moderate irritation from vapour. Irritation and possible freezing if liquid enters the eye.

Skin: Liquid can cause irritation and frostburn if in contact with skin.

Inhaled: May cause irritation to respiratory tract. Moderate exposure may cause headaches or dizziness. Elevated exposure may cause unconsciousness and respiratory arrest.

**Chronic**

Long term exposure has no known health effects.

**First Aid**

Inhaled: Call doctor. If victim is conscious: Move to uncontaminated area to breathe fresh air. Keep warm and quiet. If victim is unconscious: Move to uncontaminated area and give assisted respiration. When normal breathing is restored, treatment as above. Continued treatment should be symptomatic and supportive.

Skin: Remove contaminated clothing and shoes immediately – Clothing frozen to the skin should be thawed before being removed. L.P.G. can cause severe frostburn upon contact with the skin. Flood with cool water. Apply cold compress. If blisters occur call doctor.

Eye: If eyes become affected gently flood with tap water for at least 15 minutes, call doctor

**Advice to Doctor**

Specialist advice for treatment of cryogenic burns is available at Burns Centre. Effects of exposure may be delayed.

**General:**

Contact National Poisons Centre for further advice.

NB: Rescue personnel should be aware of extreme fire hazard associated with L.P.G. rich atmospheres.

**FIRE FIGHTING MEASURES****Flammability:**

Highly flammable at normal temperatures and pressures.

**Fire/Explosion Hazard:**

Liquid Petroleum Gas is highly flammable. Container may rupture when heated. Move cylinders from fire if safe to do so. Cool cylinders with water from a protected location. If unable to keep cylinders cool, evacuate area.

**Extinguishing Media:**

Water fog or fine water spray.

**Hazchem Code:**

2YE

**Recommended Protective Clothing:**

Full chemical protection suit and breathing apparatus should be worn.

**ACCIDENTAL RELEASE MEASURES****Personal Protection:**

Personnel engaged in the movement of cylinders shall be provided with safety footwear and leather or PVC gloves. Full cover overalls and safety glasses recommended. In areas where equipment failure may cause an immediate high concentration of L.P.G., approved self-contained full face respiratory equipment should be readily available.

**Spills and Disposal:**

Ventilate area. Stop leak if it can be done without risk. Allow gas to dissipate to atmosphere. Cold vapours are heavier than air. In case of large spillage evacuate nearby trenches, excavations, pits and the like.

**Reference Guide:**

Standard SNZ HB 76:2008 Dangerous Goods – Initial Emergency Response Guide.

**General:**

Only experienced and properly instructed personnel should handle compressed gases. Cylinder contents and identification labels provided by the supplier must not be removed or defaced. Colour coding should not be the only criterion used for content identification.

**HANDLING AND STORAGE****Handling****Flammability:**

Highly flammable at normal temperatures and pressures.

**General:**

Only experienced and properly instructed personnel should handle compressed gases. Cylinder contents and identification labels provided by the supplier must not be removed or defaced. Colour coding should not be the only criterion used for content identification.

**Approved Handlers:**

Approved handlers are required if more than 100 kg is stored on site.

**Storage**

Storage of cylinders shall be in compliance with New Zealand regulations. Cylinders shall be stored in a cool, dry, well ventilated area out of direct sunlight and away from heat and ignition sources. No part of cylinders shall be exposed to temperatures above 50°C. Cylinders shall be stored upright on a level, fireproof floor, secure in position and protected from damage. Full cylinders shall be stored separately from empties. Cylinders should be moved by hand-truck or cart designed for that purpose.

**Separation:**

Store away from clothing and combustible materials. Avoid any contact with oil or grease particularly to the cylinder valve.

**Spills and Disposal:**

Ventilate area. Stop leak if it can be done without risk. Allow gas to dissipate to atmosphere. Cold vapours are heavier than air. In case of large spillage evacuate nearby trenches, excavations, pits and the like.

**EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Standards:**

Propane - Simple asphyxiant.  
Butane - TLV 800 ppm v/v STEL - Not applicable

**Engineering Controls:**

Provide ventilation to area of use to prevent accumulation of L.P.G. at flammable concentrations.  
Provide adequate local exhaust and dilution (general) ventilation and supply sufficient replacement air to maintain oxygen concentration above 18%.

**Personal Protection:**

Personnel engaged in the movement of cylinders shall be provided with safety footwear and leather or PVC gloves. Full cover overalls and safety glasses recommended. In areas where equipment failure may cause an immediate high concentration of L.P.G., approved self-contained full face respiratory equipment should be readily available.

**PHYSICAL AND CHEMICAL PROPERTIES****Physical Properties**

Appearance:	Colourless, Odourised	Flashpoint:	-104 to 60°C
Boiling Point:	-42°C	Flammability Limits:	1.8% to 9.5%
Vapour Pressure:	Not Applicable	Solubility in Water (at 0°C):	Not Applicable

**Other Properties**

Relative Density (at 15°C) (Air = 1):	1.47 to 2.08	Density of Liquid (B.P.):	1.80 to 2.55 kg/m <sup>3</sup>
Molecular Weight:	42 to 58	Critical Temperature:	Not Applicable

**STABILITY AND REACTIVITY****Flammability:**

Extremely flammable gas

**Materials Compatibility:**

Not applicable.

**TOXICOLOGY INFORMATION**

No known toxicological effects from this product.

**ECOLOGICAL INFORMATION**

No ecological damage caused by this product.

**DISPOSAL CONSIDERATIONS**

Do not discharge into areas where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into any place where it's accumulated could be dangerous.

**TRANSPORT INFORMATION**

<b>UN Number:</b>	1075
<b>Proper Shipping Name:</b>	PETROLEUM GASES, LIQUEFIED
<b>Dangerous Goods Class and Subsidiary Risk:</b>	2.1
<b>Packing Group:</b>	Not applicable
<b>Hazchem Code:</b>	2YE
<b>Other Information:</b>	Avoid transport on vehicles where the load is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: <ul style="list-style-type: none"><li>• Ensure that containers are firmly secured.</li><li>• Ensure cylinder valve is closed and not leaking.</li><li>• Ensure there is adequate ventilation.</li><li>• Compliance with applicable regulations.</li></ul>

**REGULATORY INFORMATION**

**ERMA Register Approval No:** HSR001009

**HSNO Controls:** Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001.  
Hazardous Substances (Disposal) Regulations 2001.  
Hazardous Substances (Personnel Qualifications) Regulations 2001.  
Hazardous Substances (Emergency Management) Regulations 2001.  
Hazardous Substances (Identification) Regulations 2001.  
Hazardous Substances (Compressed Gases) Regulations 2004.  
Hazardous Substances (Tank Wagon and Transportable Containers) Regulations 2004.  
Schedule 10 of the Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004.  
Schedule 12 of the Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004.

**Approved Handlers:**

Approved handlers are required if more than 100 kg is stored on site.

**OTHER INFORMATION**

Liquid Petroleum Gas is supplied as a liquid under its own vapour pressure in cylinders.

Cylinder Colour: AS4884-2004 Silver Grey PMS 441C

Cylinder Valve Outlet: Industrial: AS 2473 Type 20, Type 21, Type 41

- References:
- . L'Air Liquide Gas Encyclopaedia - Elsevier Scientific Publishing Co. Amsterdam
  - . Cheminfo Database
  - . New Zealand Code for the Transport of Dangerous Goods by Road and Rail
  - . NHMRC Threshold Limit Values - Commonwealth Dept Health
  - . SAA Safe Storage and Handling Information Cards
  - . SAA Emergency Procedure Cards
  - . Matheson Gas Data Book, 6th Edition, Matheson 1980
  - . Canadian Liquid Air Montreal, Canada - Gas Products Safety Data Sheets
  - . AS 1894 Code of Practice for Safe Handling of Cryogenic fluids
  - . NZCIC Code of Practice - Preparation of Safety Data Sheets

**END MSDS**

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

This MSDS has been prepared in accordance with NZCIC Code of Practice – Preparation of Safety Data Sheets.

**Air Liquide regional offices contact details on following page**

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