

### 1. PRODUCT AND COMPANY DETAILS

<b>Product name</b>	Liquefied Petroleum Gas
<b>Other Names</b>	LPG, LP Gas, Propane, Butane
<b>Use</b>	As an energy source in residential, commercial, industrial and automotive markets. Packaged in cylinders.
<b>Company</b>	Hotcorp Pty Ltd T/A Hotgas 28 Central Park Drive Yandina Qld 4561
<b>General Enquiries Telephone</b>	07 5446-8777
<b>Supplier Details</b>	Origin Energy LPG Limited General Enquiries: 133574 Website: <a href="http://www.originenergy.com.au/lpg">www.originenergy.com.au/lpg</a>
<b>Emergency Telephone</b>	1800 808 526 All Hours

### 2. HAZARDS IDENTIFICATION

LPG AS SUPPLIED BY Hotgas contains less than 0.1% of 1, 3 Butadiene and is not classified as hazardous according to criteria of Safe Work Australia. LPG is classified as a Dangerous Good by the Australian Dangerous Goods Code.	
UN Number 1075	Hazchem Code 2YE
Dangerous goods class 2.1	Energy guide EPG 2A2
Flammable (F)	R12 – Extremely flammable
S9, 16 Keep container in a well-ventilated place from sources of ignition – No Smoking.	

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Entity	CAS Number	Proportion
Propane	[74-98-6]	0-99%
Propene	[115-07-1]	0-60%
Butane	[106-97-8]	0-99%
Ethane	[74-84]	0-2%
Ethyl Mercaptan (odorant)	[75-08-1]	25mg/kg
<b>NOTICE</b> – Hotgas believes that the information given herein is accurate and reliable at the date of compilation, and confirms t the guidelines of Safe Work Australia for the preparation of MSDS, but no warranty, express or implied, is made. While the MSDS provides adequate information for most handling practices.		

### 4. FIRST AID

Ingestion	Due to the high volatility of the product, this is not likely to occur. Contact Poisons Information centre on 131126 (Australia) or a doctor.
Eye	Hold eyes open and continually wash with clean water while seeking urgent medical attention. Eye wash bottles containing sterile water or normal saline solution should be kept readily available.
Skin	Cold burns: Immediately remove contaminated clothing and wash affected areas with plenty of water at room temperature (30°C) for 15 minutes to overcome frostbite. Do not use iced water. Do not apply any form of direct heat. Warm up gently. In hot conditions, cover with damp sheet to prevent too rapid heating up of affected area. Seek urgent medical attention.
Inhalation	Remove patient to fresh air and allow to rest. If patient is unconscious and breathing, place them in the recovery position,

	check airway and observe. If patient is not breathing, clear airway and apply mouth-to-mouth resuscitation. If patient is not breathing and does not have a pulse, commence cardio pulmonary resuscitation. Seek urgent medical attention.
Advice to doctor	Treat symptomatically.

#### 5. FIRE FIGHTING MEASURES

Fire/explosion hazard	Evacuate area. Remove ignition sources. Call Fire Brigade on 000. Cut off gas supply if safe to do so – do not endanger life. <b>DO NOT EXTINGUISH FIRE</b> – allow gas to burn out. Temperatures in a fire may cause cylinders or pressure vessels to rupture and pressure relief devices to be activated (venting). Use water spray to keep vessels cool – spray primarily upper surfaces. <b>Note:</b> If ignition has occurred and water is not available, the tank metal may weaken from the heat and may result in an explosion. <b>The area should be evacuated immediately. From a safe location, notify emergency services.</b> Fire fighters may need self-contained breathing apparatus <b>Hazchem Code 2YE.</b>
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#### 6. ACCIDENTAL RELEASE MEASURES

Spills and disposal (Contact Hotgas if disposal of materials is required)	Move people away and upwind from spill. Shut off supply of gas if it is safe to do so. Eliminate sources of ignition e.g. power supply, matches, non-intrinsically safe communication equipment. Ventilate area. Vapour may collect in a confined area. Remove a leaking cylinder to the open air. Avoid breathing vapour and contact with liquid or vapour. Disperse vapour with water spray. <b>Note:</b> Vapour is heavier than air and will settle at the lowest point, e.g. ditches, drains and watercourses. <b>Do not</b> attempt to repair leaking valve or cylinder fusible plugs. Contact Hotgas or a licenced gas fitter.
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#### 7. HANDLING AND STORAGE

	Store in approved areas as defined by current issue of AS1596. Comply with the current issue of the Australian Code for the Transportation of Dangerous Goods by Road and Rail, and with the relevant Dangerous Goods Legislation in each state of Territory. Store containers in an upright position (even when empty); keep away from heat sources; do not drop; keep valves closed when not in use. Ensure dust and rain caps are fitted at all times. Store away from oxidising substances e.g. pool chlorine. Avoid contact with eyes.
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#### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Propane is an asphyxiant – Safe Work Australia Exposure Standard. Propylene is an asphyxiant – Safe Work Australia Exposure Standard. Butane – ES-TWA 800 ppm TWA 1900mg/m <sup>3</sup> .	
<b>Engineering controls</b>	
Ignition sources	No smoking. No flames. Follow procedures to avoid static discharges. Use only intrinsically safe communication equipment (e.g. mobile phones and pagers).

	Use non-spark generating tools and flameproof (intrinsically safe) equipment.
Ventilation	Maintain adequate ventilation. LPG appliances can be hazardous when used in a poorly ventilated room.
Usage	In applications other than as a forklift cylinder, all cylinders should be used in the upright position. Use only equipment approved for LPG installations and install in accordance with AS1596 and AS5601.
Personal protection	Thermally insulated or leather <b>gloves</b> and close-fitting <b>protective glasses</b> with side visors are recommended when handling liquid. <b>Long sleeved shirts</b> and <b>long trousers</b> made from natural materials.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical description/properties

Appearance	Colourless, odourless gas supplied in compressed liquid from in a pressure container. A strong and distinctive odour is added to assist in the early detection of even minor leaks.
Boiling Point -42°C	Flash Point -80°C (increasing with increased concentration of n-butane)
Vapour Pressure (at 40°C) 1275kPa Max	Flammability Limits 2.4% to 9.6% in air (v/v)
Solubility in Water (at 20°C) <200 ppm	Auto Ignition Temperatures 450°C to 540°C
Specific Gravity Liquid 0.51 - 0.58 (water = 1)	Specific Gravity Gas 1.52 - 2.01 (air = 1)
Expansion ratio	1 volume of liquid LPG expands to 273 litres of LPG vapour.

### 10. STABILITY AND REACTIVITY

	Stable under normal ambient conditions of storage and use. Avoid heat sources.
	Can react violently with oxidising agents – chlorine, pool chlorine or nitric acid.

### 11. TOXICOLOGICAL INFORMATION

#### Health effects from acute exposure

Acute toxicity	No known effect
Eyes	Not classified as an eye irritant. Contact with liquefied material or escaping compressed gas may cause frostbite
Skin	Not classified as a skin irritant. Vapourising liquid or liquid contact can result in cold contact burns.
Inhaled	May cause light-headedness, dizziness and drowsiness, weakness, fatigue and breathing difficulties.

#### Health effects from chronic exposure

Specific Target Organ Toxicity (single exposure)	Asphyxiant. Excessive exposure may cause unconsciousness or even death, due to asphyxiation (refers to vapour not liquid).
Carcinogenicity	No known effect
Mutagenicity	No known effect
Teratogenicity	No known effect
Sensitisation	Not classified as causing skin or respiratory sensitisation
Reproductive	Not classified as a reproductive toxin

**12. ECOLOGICAL INFORMATION**

	<p>LPG will vapourise rapidly when released to atmosphere. LPG consists of hydrocarbons that photo chemically decompose under atmospheric conditions. Not toxic to flora, fauna or soil organisms. Will not cause long term adverse effects in the environment and is not dangerous to the ozone layer.</p>
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**13. DISPOSAL CONSIDERATIONS**

	<p>Contact Hotgas if disposal of LPG is required as all LPG cylinders are accepted for disposal at the yard.</p>
	<p>LPG cylinders should be returned to the owning organisation stamped on the cylinder when no longer required. Small customer owned cylinders should be made safe at a Gas Cylinder Test Station before disposal. Check with local Council re acceptance for disposal to landfill. Do not incinerate LPG cylinders.</p>

**14. TRANSPORT INFORMATION**

Transport Information	UN number <b>UN 1075</b>	Shipping name <b>LPG</b>
	Class <b>2.1</b>	Hazchem Code <b>2YE</b>
	<p>Cylinders must be secured in an upright position for transport. Transport in accordance with the requirements of ADG Code and the Load Restraint Guide. Check for other regulatory requirements for the transportation of LPG in your state.</p>	

**15. REGULATORY INFORMATION**

Poisons schedule number	None allocated.
	<p>LPG is prescribed Dangerous Goods and its storage and handling is covered by various pieces of legislation in all States. The installation of LPG equipment must be performed only by appropriately licensed or authorised persons. Check for other regulatory requirements for the storage and use of unodourised LPG in your State.</p>

**16. OTHER INFORMATION**

'Empty' container warning	<p>'Empty' containers retain residue (liquid and/or vapour) and can be dangerous. Do not attempt to clean since residue is difficult to remove. <b>Do not pressurise, cut, weld, braze, solder, drill, grind or expose such containers to heat flame, sparks and other sources of ignition. They may explode and cause injury or death.</b> All containers should be returned to the supplier. Privately owned containers no longer required should be disposed of in an environmentally safe manner, and in accordance with Government regulations. Seek expert advice if repairs or modifications to installation are required.</p>
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