

Richard Foot Pty Ltd

MATERIAL SAFETY DATA SHEET

PRODUCT: BUTANE GAS

PRODUCT IDENTIFICATION

Trade Name:
Other Name: LPG, Propane, Unodorised Liquefied Petroleum Gas

UN No: 1075
Dangerous Goods Class: 2.1
Hazchem Code: 2WE
Emergency Guide: EPG 2A2
Poisons Schedule: N/A

Hazard Identification

Classified as hazardous according to criteria of Worksafe Australia

Use

Industrial applications (eg. Aerosols, chemical)

Physical Description/Properties

Colourless, odourless gas supplied in compressed liquid form in a pressure container.

Boiling Point:	-42°C to 0°C
Flash Point:	-104°C to -60°C
Vapour Pressure @ 40°C:	520 to 1530 kPA
Flammability Limits:	1.5% to 9.6% in air (v/v)
Solubility in water @ 20°C	<200ppm
Autoignition Temperature:	494°C to 600°C
Specific Gravity	Liquid 0.51 to 0.58 (water = 1) Gas 1.52 to 2.01 (air = 1)
Other Properties	Can react violently with oxidising agents - chlorine, pool chlorine or nitric acid.

Ingredients

Chemical Entity:	CAS NO:	Proportion:
Propane	[74-98-6]	0 - 99%
Butane	[106-97-8]	0 - 99%

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HEALTH HAZARD INFORMATION

Health Effects

Acute Exposure:

Swallowed: Due to high volatility of product, this is not likely to occur.

Eye: Liquid will cause severe damage. Vapour will cause irritation.

Skin: Vaporising liquid or liquid contact can result in cold contact burns.

Inhaled: May cause light-headedness, dizziness and drowsiness. Excessive exposure may cause unconsciousness or even death, due to asphyxiation. (Refers to vapour not liquid).

Chronic Exposure:

No chronic systemic effects reported from industrial exposures.

Note: This product has no odour and is therefore undetectable by smell.

First Aid

Swallowed: Due to high volatility of product, this is not likely to occur.

Eye: Hold eyes open and continuously 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: Immediately wash effected areas with plenty of water at room temperature to overcome frostbite. Do not use iced water. Warm up gently. In hot conditions, cover with damp sheet to prevent too rapid heating up of affected area. Seek urgent medical attention.

Inhaled: Remove patient to fresh air and allow to rest. If patient is unconscious and breathing, place them in the coma 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.

PRECAUTIONS FOR USE

Exposure Standards: Propane is an ASPHYXIAN (documented by Worksafe Australia).
Butane is 800ppm (documented by Worksafe Australia).

Engineering Controls:

Ignition Sources Follow procedures to avoid static discharges.

Use only intrinsically safe communication equipment (eg mobile phones and pagers).

Use non-spark generating tools and flameproof (intrinsically safe) equipment.

Ventilation: Maintain adequate ventilation. LP Gas appliances can be hazardous when used in a poorly ventilated room.

Personal Protection: Approved thermally insulated gloves and goggles are recommended when handling liquid. Long sleeved shirts and long trousers made from natural materials should be worn when handling LP Gas.

Flammability: Flammable. Isolate from sources of heat, naked flames or sparks.

Smell: People need to be made aware that this gas has NO SMELL. Gas detectors need to be installed and properly maintained.

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SAFETY HANDLING INFORMATION

- Storage and Transport:** 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 or 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 eg pool chlorine. Store in well-ventilated area.
Cylinders must be secured in an upright position for transport.
- Spills and Disposal:** Move people away and upwind from spill. Shut off supply of gas if it is safe to do so. Eliminate sources of ignition eg. Power supply. Ventilate area.
Remove leaking cylinder to open air.
Avoid breathing vapour and contact with liquid or vapour. Disperse vapour with water spray. Note that vapour is heavier than air and will settle at the lowest point eg ditches, drains and watercourses.
- Fire/Explosive Hazard:** Evacuate area, remove ignition sources. Cut off gas supply if safe to do so - do not endanger life. DO NOT EXTINGUISH FIRE - allow gas to burn out.
Use water to keep vessel cool.
NOTE: If ignition has occurred and water is not available, the tank metal may weaken from the heat and may result in an explosion.
The area should be evacuated immediately. From a safe location, notify emergency services.
- Combustion Products:** Carbon dioxide, water vapour, traces of carbon monoxide and nitrogen oxides. Fumes, smoke, carbon monoxide and aldehydes can be formed during incomplete combustion. Fire fighters may need self contained breathing apparatus.

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