

ODOURISED COMMERCIAL PROPANE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Odourised Commercial Propane
Product Code	1811225, 1811228
Other Names	-
Product Use	Heating
Company Name	Bromic Group
Address	10 Phiney Place Ingleburn NSW 2565
Telephone Number	02 9426 5222
Emergency Telephone	1300 276 642

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Extremely flammable liquefied gas under pressure. Keep away from heat, sparks, flame, and all other ignition sources. Vapour is heavier than air and travel along the ground to possible distant ignition sources causing an explosive flashback.

Vapour replaces oxygen available for breathing and may cause suffocation in confined spaces. Avoid breathing vapour. Use only with adequate ventilation. Where appropriate, use proper respiratory protection and personal protective equipment. Liquid can cause freeze burn similar to frostbite. Do not get liquid in eyes, on skin, or on clothing. Keep service valve closed when not in use.

POTENTIAL HEALTH EFFECTS INFORMATION

Inhalation: Asphyxiation. Exposure to concentrations >10% may cause dizziness. Exposure to atmospheres containing 19% or less oxygen will bring about unconsciousness without warning. Lack of sufficient oxygen may cause serious injury or death

Ingestion: Ingestion is not expected to occur in normal use. Liquid can cause freeze burn similar to frostbite.

Eye Contact: Contact with liquid can cause freezing of tissue.

Skin Contact: Contact with liquid can cause frostbite.

Skin Absorption: None.

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.

Classified as hazardous according to the criteria of Safe Work Australia.

DANGER

Hazards F⁺ - Extremely flammable

Risk Phrases R12 - Extremely flammable

Safety Phrases S2 - Keep out of reach of children
S9 - Keep container in a well-ventilated place.
S16 - Keep away from sources of ignition - No smoking.
S33 - Take precautionary measures against static discharges.



3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterisation Mixture

Ingredient (common name)	CAS Number	Proportion
Propane	74-98-6	87.5-100%
Ethane	74-84-0	0-7%
Propylene	115-07-1	0-5%
Butane	106=97-8	0-2.5%
Ethyl mercaptan (odourant)	75-08-1	<0.1

4. FIRST AID MEASURES

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical attention.
Ingestion	Never give anything by mouth to an unconscious person. Seek immediate medical attention.
Skin	In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. If frostbite occurs, immerse involved area in lukewarm water (20-30°C). Keep immersed for 20-40 minutes. Seek immediate medical attention.
Eyes	In case of eye contact, immediately flush eyes with plenty of lukewarm water (20-30°C) for at least 15 minutes. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

	For major fires call the Fire Brigade. Ensure that an escape path is available from any fire.
Suitable Extinguishing Media	Dry chemical, carbon dioxide, water spray or fog for surrounding area. Do not attempt to extinguish fire until propane source is isolated.
Hazardous Combustion Products	None.
Special Protective Actions for Firefighters	Evacuate all unnecessary personnel from the area. Allow only properly trained and protected emergency response personnel in area. A Safe Work Australia approved self-contained breathing apparatus may be required. Shut off leaks, if possible and without personal risks. If gas flow cannot be shut off, do not attempt to extinguish fire. Allow fire to burn out. Use high volume water supply to cool exposed pressure containers and nearby equipment. Approach a flame-enveloped container from the sides, never from the ends. Use extreme caution when applying water to a container that has been exposed to heat or flame for more than a short time. For uncontrollable fires and/or when flame is impinging on container, withdraw all personnel and evacuate vicinity immediately.
Unusual Fire or Explosion Hazards	Propane is heavier than air and travel along the ground to possible distant ignition sources causing an explosive flashback. Pressure in a container can build up due to heat. Container may rupture suddenly and violently without warning if pressure relief devices fail to function properly. If flames are against the container, withdraw immediately on hearing a rising sound, if venting increases in volume or intensity or if there is discoloration of the

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container due to fire.
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6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions,
Protective Equipment
and Emergency
Procedures**

Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing. Evacuate all non-essential personnel from affected area. Stay upwind and keep out of low areas. Do not breathe fumes and vapour. Ventilate contaminated area thoroughly. Remove all sources of ignition. Use a spark-proof tool. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Avoid contact with spilled or released material. Immediately remove all contaminated clothing. Do not attempt to do so if clothing is adhering to skin.

**Environmental
Precautions
Methods and Materials
for Containment and
Cleaning Up**

In the event of a major spill, prevent spillage from entering drains or water courses.
Shut off leaks, if possible and without personal risks. Allow product to evaporate.

7. HANDLING AND STORAGE

**Precautions for Safe
Handling**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Use only with adequate ventilation. Prevent exposure to ignition sources. Use non-sparking tools and explosion-proof equipment. Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Material can accumulate static charges which may cause an electrical spark.

Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers. Do not drop or abuse cylinders. Never strike an arc on a gas container or make a container part of an electrical circuit.
Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

**Conditions for Safe
Storage**

Store in a tightly closed original container in a cool, dry, and well ventilated area. Do not expose to temperatures exceeding 50°C. Isolate from combustible materials. Provide separate storage locations for other compressed and flammable gases. Propane containers should be separated from oxygen cylinders or other oxidizers by a minimum distance of 6m, or by a barrier of non-combustible material at least 1.5m high having a fire rating of at least 30 minutes.

Full and empty cylinders should be segregated. Keep cylinders in an upright position at all times. Keep container valve closed and plugged or capped when not in use. Install protective caps when cylinders are not connected for use.
Protect from heat, sparks, flame and other sources of ignition. Keep away from contact with oxidizing and other incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters - Exposure Standards (Safe Work Australia)

Butane:
TWA: 800 ppm / 1900 mg/m³
STEL: - ppm / - mg/m³

Ethyl mercaptan:
TWA: 0.5 ppm / 1.3 mg/m³
STEL: - ppm / - mg/m³

Engineering Controls

Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.

Personal Protective Equipment (PPE)

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, use a Safe Work Australia approved self-contained breathing apparatus. See Australian Standards AS/NZS 1715 and 1716 for more information.

Eye/Face Protection

Safety glasses with top and side shields or goggles. See Australian Standards AS 1336 and AS/NZS 1337 for more information.

Skin Protection

Wear gloves and protective clothing that are impervious to the product for the duration of the anticipated exposure. Safety shoes are recommended when handling cylinders. See Australian Standards AS 2161 and 2919 and AS/NZS 2210 for more information.

Thermal Hazards

No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless gas (at normal temperature and pressure)
Odour	Strong, unpleasant, mercaptan odour
Odour Threshold	No information available
pH	No information available
Melting Point / Freezing Point	No information available
Initial Boiling Point / Range	-42°C @ 1 atm. pressure
Flash Point	-104°C
Evaporation Rate	No information available
Flammability	Extremely flammable
Lower Flammability or Explosive Limit	2.15%
Upper Flammability or Explosive Limit	9.6%
Vapour Pressure	127 psig @20°C, 210 psig @45°C, 287 psig @55°C
Vapour Density	1.5 @ 15.56°C
Relative Density (Specific Gravity)	0.504 @ 15.56°C (liquid)

Solubility in Water	Slight (0.1%-1%)
Partition coefficient: n-octanol/water	No information available
Ignition Temperature	493°C - 549°C
Decomposition Temperature	No information available
Viscosity	No information available
Odourant Warning	Ethyl mercaptan (odourant) is added to aid in the detection of leaks due to a foul smell. The odour level can be reduced by certain chemical reactions with material in the propane system or when fugitive propane gas from underground leaks passes through certain soils. No odorant will be 100% effective in all circumstances.

10. STABILITY AND REACTIVITY

Chemical Stability	Stable at ambient temperature and under normal conditions of use
Hazardous Polymerization	Will not occur.
Conditions to Avoid	Strong heat and sources of ignition.
Incompatible Materials	Strong oxidising agents.
Hazardous Decomposition Products	Under fire conditions, fumes, smoke, carbon monoxide, aldehydes and other decomposition products.

11. TOXICOLOGICAL INFORMATION

Toxicity	<p>Propane: May be harmful if inhaled. Asphyxiant at high concentrations.</p> <p>Propylene: Asphyxiant. May be harmful by inhalation. Laboratory animals exposed to high levels of propylene for prolonged periods of time showed evidence of effects in the liver, kidneys and nasal cavity. Propylene is classified by IARC as a Group 3 - Not classifiable as to its carcinogenicity to humans.</p> <p>Butane: Inhalation LC₅₀ (rat) = 658 g/m³/4h Inhalation LC₅₀ (mouse) = 680 g/m³/2h May be harmful if inhaled. Can cause rapid suffocation. Eye irritant. Narcotic.</p> <p>Ethane: Asphyxiant. May be harmful if inhaled. Toxicology not fully investigated.</p> <p>Ethyl mercaptan: Oral LD₅₀ (rat) = 1960 mg/kg Inhalation LC₅₀ (mouse) = 4420 ppm /4h Intraperitoneal LD₅₀ (rat) = 450 mg/kg Irritant. Harmful if inhaled. May act as a narcotic in moderate concentrations. Ethyl mercaptan is the preferred warning agent for propane. Any smell of odourant, even a faint one, may indicate a dangerous situation. Effectiveness of the odourant may be reduced by cold temperatures, other odours, such as from cooking. It may fade from</p>
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	rust air and water in used containers that have been allowed to stand open to the atmosphere.
Acute Health Effects	
Skin	Contact with liquid can cause frostbite
Corrosion/Irritation	
Serious Eye	Contact with liquid can cause freezing of tissue.
Damage/Irritation	
Sensitization	None.
Mutagenicity	None.
Carcinogenicity	Propylene is classified by IARC as a Group 3 - Not classifiable as to its carcinogenicity to humans.
Reproductive Toxicity	None.
STOT-Single	No information available.
Exposure	
STOT-Repeated	No information available.
Exposure	
Aspiration Hazard	No information available.
Routes of Exposure	Inhalation: Asphyxiation. Exposure to concentrations >10% may cause dizziness. Exposure to atmospheres containing 19% or less oxygen will bring about unconsciousness without warning. Lack of sufficient oxygen may cause serious injury or death Ingestion: Ingestion is not expected to occur in normal use. Liquid can cause freeze burn similar to frostbite. Eye: Contact with liquid can cause freezing of tissue. Skin: Contact with liquid can cause frostbite. Skin Absorption: None.
Chronic Health Effects	None.
Existing Conditions	Individuals with nasal perception problems may not be able to smell
Aggravated by	the ethyl mercaptan (odourant)
Exposure	

12. ECOLOGICAL INFORMATION

Ecotoxicity	No adverse ecological effects are expected.
Bioaccumulation, Persistence and Degradability	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods and containers	Do not attempt to dispose of residual or unused product in the container; return it to your supplier. Dispose according to applicable local and state government regulations.
Special precautions for landfill or incineration	Please consult your state Land Waste Management Authority for more information.

14. TRANSPORT INFORMATION

Classified as a dangerous good according to the Australian Code for the Transport of Dangerous goods by road or rail.

UN Number	1075
Proper Shipping Name	PETROLEUM GASES, LIQUEFIED
Dangerous Goods Class	2.1
Subsidiary Risk	Not applicable
Hazchem Code	2YE
Packing Group	Not applicable
Special Provisions	AU 03
Limited Quantities	0
Packagings & IBCs - Packing Instruction	P200
Packagings & IBCs - Special Packing Provisions	Not applicable
Portable Tanks & Bulk Containers – Instructions	T50
Portable Tanks & Bulk Containers – Special Provisions	TP33
SEA TRANSPORT – IMDG	
UN Number	1075
Proper Shipping Name	PETROLEUM GASES, LIQUEFIED
Dangerous Goods Class	2.1
Packing Group	Not applicable
Marine Polutant	No
AIR TRANSPORT – ICAO / IATA	
UN Number	1075
Proper Shipping Name	PETROLEUM GASES, LIQUEFIED
Dangerous Goods Class	2.1
Packing Group	Not applicable



15. REGULATORY INFORMATION

Propane, propylene, butane, ethane and ethyl mercaptan are listed in the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Last Revision of MSDS Rev 1.0 (26/09/2016)
Prepared by MSDS.COM.AU Pty Ltd www.msds.com.au

Abbreviations Used
 IARC: International Agency for Research on Cancer
 ASCC: National Occupational Health and Safety Commission
 NTP: National Toxicology Program (U.S.)
 OSHA: Occupational Safety and Health Administration (U.S.)
 STEL: Short term exposure limit
 TWA: Time weighted average

Emergency Contacts

Bromic Group ~~02 9748 3900~~
Bromic Group – Emergency Number 1300 276 642
Police and Fire Brigade 000
Poisons Information Centre 13 11 26

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Please read instructions / label before using product.

This MSDS is prepared in accord with the Safe Work Australia document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]