

Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: PROPANE

Other name(s): LPG; LP Gas; Liquefied Petroleum Gas.

Recommended Use of the Chemical and Restrictions on Use As a fuel in domestic, commercial, industrial, and automotive applications.

Supplier: Ixom Operations Pty Ltd
ABN: 51 600 546 512
Street Address: Level 8, 1 Nicholson Street
East Melbourne Victoria 3002
Australia

Telephone Number: +61 3 9906 3000
Emergency Telephone: 1 800 033 111 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Unodourised LP Gas may only be transported if each of the following conditions is met:

- (a) each route used for the transport must have been determined by an appropriate risk management assessment; and
- (b) each load must be accompanied by a gas detector suitable for the detection of LP Gas, in accordance with AS 1596, and by a person trained in its operation; and
- (c) that person must use the gas detector to check for the presence of LP Gas in the vicinity of the load at each routine stop that the vehicle makes, and on any other occasion when there is a significant risk that LP Gas may have leaked, and must record in writing the details of each test; and
- (d) the word "Unodourised" must be included as part of the shipping name displayed on vehicle emergency information panels; and
- (e) a copy of the Transport Emergency Response Plan must be provided to the relevant hazmat incident combat agency, before the journey commences.

This provision does not apply to South Australia. The transport of unodourised LP Gas is prohibited in South Australia unless exempted by the Competent Authority in South Australia.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

Classification of the chemical:

Flammable Gases - Category 1
Gases under pressure - Liquefied Gas

SIGNAL WORD: DANGER



Product Name: PROPANE
Substance No: 000030705901

Issued: 28/01/2016
Version: 2

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**Hazard Statement(s):**

H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.

Precautionary Statement(s):**Prevention:**

P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.

Response:

P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 Eliminate all ignition sources if safe to do so.

Storage:

P410+P403 Protect from sunlight. Store in a well-ventilated place.
P403 Store in a well-ventilated place.

Disposal:

No disposal statements.

Poisons Schedule (SUSMP): None allocated.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Propane	74-98-6	99.5-99.9%	H220

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Take precautions to ensure rescuer is not overcome. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discoloration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If skin contact occurs, remove contaminated clothing and wash skin with soap and water. If irritation occurs, seek medical advice.

Eye Contact:

If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion:

If sprayed in mouth, rinse mouth with water. If swallowed, do NOT induce vomiting. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2YE

Specific hazards arising from the chemical:

Flammable gas.

Special protective equipment and precautions for fire-fighters:

Flame may not be visible to the naked eye. On burning will emit toxic fumes, including those of oxides of carbon. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Keep containers cool with water spray. Flameproof equipment is necessary in all areas where this chemical is being used. Nearby equipment must be earthed. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion. Ruptured containers will rocket.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Shut off all possible sources of ignition. Clear area of all unprotected personnel. Increase ventilation.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

If safe to do so, isolate the leak. Small spills are allowed to evaporate provided there is adequate ventilation. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Avoid breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Use non-sparking tools.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid skin and eye contact and breathing in vapour. May form flammable vapour mixtures with air. Vapour may travel a considerable distance to source of ignition and flash back. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke. Flameproof equipment is necessary in all areas where this chemical is being used. Nearby equipment must be earthed. Take precautionary measures against static discharges. Do not drag, drop, slide or roll cylinders. The uncontrolled release of a gas under pressure may cause physical harm. Use a suitable hand truck for cylinder movement. Do not heat up. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place. Store away from sources of heat or ignition. Store below 54°C. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Propane: Asphyxiant

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As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

Asphyxiant - gases which can lead to reduction of oxygen concentration by displacement or dilution. The minimum oxygen content in air should be 18% by volume under normal atmospheric pressure.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. An asphyxiant gas which can lead to the displacement or dilution of oxygen. The minimum oxygen content in air should be 18% by volume under normal atmospheric pressure. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.



Wear overalls, chemical goggles and impervious gloves. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquefied gas
Colour:	Colourless
Odour:	Odourless
Solubility:	Negligible solubility in water.
Specific Gravity:	0.564 g/mL @20°C
Relative Vapour Density (air=1):	1.56
Vapour Pressure (20 °C):	8531.6 hPa @21.1°C
Flash Point (°C):	-104 (Closed cup)
Flammability Limits (%):	2.1-9.5 (V)
Autoignition Temperature (°C):	480
Boiling Point/Range (°C):	-42.1

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pH: Not applicable

10. STABILITY AND REACTIVITY

Reactivity:	No information available.
Chemical stability:	Stable.
Possibility of hazardous reactions:	Can react violently with chlorine , pool chlorine , or nitric acid .
Conditions to avoid:	Avoid exposure to heat, sources of ignition, and open flame. Avoid exposure to direct sunlight. Avoid exposure to extremes of temperature.
Incompatible materials:	Incompatible with strong oxidising agents.
Hazardous decomposition products:	Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is showing signs of central system depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs.
Eye contact:	Vapour from product may irritate eyes. Liquid splashes or spray may cause freeze burns to the eye.
Skin contact:	Contact with skin may result in irritation. Liquid splashes or spray may cause freeze burns.
Inhalation:	Vapours may cause drowsiness and dizziness. Intentional misuse by deliberately concentrating and breathing the contents can be harmful or fatal. An asphyxiant; exposure to high concentrations can eventually lead to a lack of oxygen in the blood, which may cause death.

Acute toxicity: No LD50 data available for the product.

Chronic effects: Not listed as carcinogenic according to the International Agency for Research on Cancer (IARC).

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport

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UN No: 1978
Transport Hazard Class: 2.1 Flammable Gas
Proper Shipping Name or Technical Name: PROPANE
Hazchem or Emergency Action Code: 2YE

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 1978
Transport Hazard Class: 2.1 Flammable Gas
Proper Shipping Name or Technical Name: PROPANE

IMDG EMS Fire: F-D
IMDG EMS Spill: S-U

Air Transport

TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in Passenger and Cargo Aircraft, and Cargo Aircraft Only.

15. REGULATORY INFORMATION

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

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Hazard Statement(s):

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H280 Contains gas under pressure; may explode if heated.

Poisons Schedule (SUSMP): None allocated.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

Reason(s) for Issue:

Revised Primary SDS
Change in company details

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.