

Material Safety Data Sheet

MAX POWER PROPYLENE™_I

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND SUPPLIER

Product Name: MAX POWER PROPYLENE™

Other Names: Propylene

Recommended use: Propylene gas for use in domestic, commercial industrial and automotive applications.

Supplier: Irwin Industrial Tool Company Pty Ltd
ABN: 30 005 543 966
Address: 2 National Drive
Dandenong South VIC 3175
Australia

Telephone: +61 8 9259 8888 (WA) or +61 3 8787 3888 (all other states)

Facsimile: +61 8 9259 8800 (WA) or +61 3 8787 3800 (all other states)

Emergency Phone: (08) 9259 8888 (WA: 8.30 am – 5 pm) or (03) 8787 3888 (Vic: 8 am – 6 pm)

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE – DANGEROUS GOOD

This product contains propylene, a colourless liquid that rapidly turns into a gas at standard atmospheric temperatures and pressure. Propylene has a slight hydrocarbon odour. In commerce, propylene is packaged as a liquefied gas under pressure. Propylene is extremely flammable and explosive. At high concentrations it acts as a simple asphyxiate by diluting and displacing oxygen, particularly in confined spaces. Direct contact with liquefied product may cause freeze burns and frostbite. Use this product only in well-ventilated areas and, where appropriate, proper respiratory protection and personal protective equipment should be worn.

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 identity	CAS Number	Proportion (Weight %)
Propylene	115-07-1	97 %
Propane	74-98-6	3 %

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre.

Swallowed: Risk of ingestion is extremely low. Seek immediate medical attention in cases of ingestion or oral exposure.

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Eye: If there is contact with liquid, flush eyes with plenty of water for at least 15 minutes while lifting the eyelids. Seek medical attention.

Skin: Remove contaminated clothing. Wash with soap and water. Seek medical attention if irritation or redness develops. In case of frostbite, place affected area in warm water or wrap in blankets if warm water is not available. **Do not use hot water!** Seek immediate medical attention.

Inhaled: In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/unconsciousness. In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of coordination. Remove affected person to fresh air. Administer oxygen or artificial respiration if necessary. Seek medical attention immediately.

Notes to doctor: Treat symptoms.

5. FIRE FIGHTING MEASURES

Specific hazards: Extremely flammable gas. Liquefied gas under pressure. Liquid releases vapours that readily form a flammable mixture with air. Dangerous fire and explosion hazard when exposed to heat, sparks or flame. Vapours are heavier than air and may travel considerable distances to a point of ignition and flash back. Cylinders may rupture or explode violently from pressure when exposed to heat or flame.

Extinguishing media: Dry chemical, foam, carbon dioxide or water can be used on fires. Dry powder recommended for small fires.

Fire fighting procedures: Extremely flammable gas. Use extreme caution when fighting liquefied petroleum gas fires. Heated containers may rupture violently and suddenly without warning due to vessel overpressure (BLEVE – Boiling Liquid Expanding Vapour Explosions). If possible, and safe to do so, stop the flow of gas and allow the flame to burn out. Extinguish the flame before shutting off the supply can cause formation of explosive mixtures. In some cases it may be preferable to allow the flame to continue to burn. Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. Use water to cool containers until well after flames are extinguished. Extinguish any other fire. Firefighters must wear self-contained breathing apparatus with full face-mask and protective clothing in fire situations or in confined spaces.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide and various non-combusted hydrocarbons.

Hazchem Code: 2YE

6. ACCIDENTAL RELEASE MEASURES

Eliminate all sources of ignition – no smoking. Take precautionary measures against static discharges. Evacuate all personnel from the affected area and increase ventilation. If possible, stop flow of product. In case of major escape of gas wear self contained breathing apparatus when entering area unless atmosphere has been proven to be safe. Prevent accumulation of product in sewers, basements and other enclosed areas – severe explosion risk. Use appropriate protective equipment. Small quantities of spilled product may be allowed to evaporate – vapour should be dispersed by effective ventilation.

7. HANDLING AND STORAGE

Handling: Open valve slowly to avoid pressure shock. Keep away from flame, sparks and excessive temperatures. Avoid all ignition sources. Flameproof equipment necessary in area where this product is being used. Containers must be earthed to avoid generation of static charges. Use only in well-ventilated areas.

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Storage: Store in a cool, dry, well-ventilated area away from sources of ignition, strong oxidizers or other incompatible materials. Keep containers closed at all times – check regularly for leaks. Ensure equipment is electrically bonded and earthed to prevent static accumulation. Segregate from acetylene, oxidizing gases (e.g. oxygen) and other oxidizing agents in store. Protect cylinders against physical damage. Do not cut, drill, grind or weld on empty cylinders since they may contain explosive residues. Do not attempt to refill cylinders. Do not smoke in areas of use or storage. Observe State Regulations concerning the storage and handling of Dangerous Goods. Store in accordance with all precautions required for handling flammable gases. Refer to supplier's container handling instructions.

Incompatibilities: Not to be stored with explosives (Class 1), flammable liquids in bulk (Class 3), flammable solids (Class 4.1) spontaneously combustible substances (Class 4.2), dangerous when wet substances (Class 4.3), oxidizing agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7). Exemptions may apply.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure standards

Substance	TWA	STEL		Carcinogen Category	Notices
Propylene	Asphyxiant	None allocated	None allocated	None allocated	None allocated
Propane	Asphyxiant	None allocated	None allocated	None allocated	None allocated

As published by Australian Safety and Compensation Council.

Simple asphyxiants are gases which, when present in an atmosphere in high concentrations, lead to a reduction of oxygen concentration by displacement or dilution. It is not appropriate to recommend an exposure standard for each simple asphyxiant, rather it should be required that a sufficient oxygen concentration be maintained. The minimum oxygen content in air should be 18 per cent by volume under normal atmospheric pressure.

Engineering controls: Good industrial hygiene practice requires that engineering controls be used where feasible to reduce workplace concentrations of hazardous materials. Use adequate ventilation to keep gas and vapour concentrations of this product below the occupational exposure and flammability limits, particularly in confined spaces. Use mechanical ventilation that has explosion proof electrical fittings. Keep containers tightly closed when not in use.

Personal Protection

Skin: Protective gloves should be worn as required for welding or burning. Use insulated gloves where there is possibility of liquid contact.

Eye: Use safety glasses or goggles as required for welding or burning. Use splash-proof goggles or faceshield where there is possibility of liquid contact.

Respiratory: Maintain oxygen levels above 19.5% in the workplace. Respirators must be worn if ambient concentrations of contaminants exceed prescribed exposure limits. Seek professional advice prior to respirator selection and use. Select respirators based on the suitability to provide adequate worker protection for given work conditions, level of airborne contamination, and presence of sufficient oxygen. When required, only approved respirators should be used.

Protective clothing should be worn to prevent skin contact. Do not smoke while handling product. Ensure adequate ventilation. Keep escape type self-contained breathing apparatus readily available for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	colourless gas with sulfur (rotten egg) odour
Boiling Point:	-47.8°C
Melting Point:	not applicable
Vapour pressure:	1020 kPa (20°C)
Specific gravity:	0.512 (21°C)
Flash Point:	-107.8°C (CC)
Molecular Weight:	42
Flammability Limits:	% by volume lower: 2.0 % by volume upper: 11.1
Autoignition temperature:	497.2°C

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Solubility in water: 384 mg/L
Vapour Density: 1.45 at 21°C (air = 1)
Critical temperature: 92.4°C

10. STABILITY AND REACTIVITY

Chemical stability: Stable. Can form explosive mixture with air.
Hazardous polymerization: Does not polymerize except under special conditions (extreme temperature, pressure, oxidizing agents).
Incompatible materials: May react violently with strong oxidizing agents, e.g. nitrates, perchlorates, chlorine and fluorine.
Conditions to avoid: Sources of heat, sparks or flame.
Hazardous decomposition products: Carbon oxides and various hydrocarbons formed when burned.

11. TOXICOLOGICAL INFORMATION

Swallowed: Ingestion is not likely.

Eye: Vapour is generally non-irritating to the eyes. Contact with liquefied gas or rapidly expanding gases may cause freeze burns and frostbite.

Skin: Vapour is generally non-irritating to the skin. Contact with liquefied gas or rapidly expanding gases may cause freeze burns and frostbite.

Inhaled: Product is an anaesthetic at high concentrations. Inhalation may cause central nervous system depression producing dizziness, drowsiness, headache, and similar narcotic symptoms. At high concentrations propylene acts as a simple asphyxiant without sufficient potential for systemic toxicity. Extremely high concentrations can cause asphyxiation and death by displacing oxygen from the breathing atmosphere.

Chronic: Propylene is not identified as being carcinogenic by IARC, NTP, ACGIH, OSHA or NOHSC.

Chronic diseases or disorders of the respiratory system can be aggravated by exposure to this product.

12. ECOLOGICAL INFORMATION

No known ecological damage caused by this product.

13. DISPOSAL CONSIDERATIONS

Do not dispose of any non-empty containers. Cylinders should be emptied and returned to an approved hazardous waste collection point or to supplier for rechecking and refilling. Do not discharge into any area where there is a risk of forming an explosive mixture with air. Waste gas should be flared through a suitable burner with flash back arresters. Empty cylinders will still contain flammable vapour. Contact supplier if guidance is required.

14. TRANSPORT INFORMATION

Road and Rail Transport (Australian Dangerous Goods Code):

UN Number: 1077
Proper Shipping Name: PROPYLENE
Class: 2.1 Flammable gas
Subsidiary Risk: None allocated
Hazchem Code: 2YE
Packing Group: None allocated

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Marine Transport (International Maritime Dangerous Goods Code):

UN Number: 1077
Proper Shipping Name: PROPYLENE
Class: 2.1 Flammable gas
Subsidiary Risk: None allocated
Packing Group: None allocated
Marine Pollutant: No

Air Transport (International Air Transport Association Dangerous Goods Regulations):

UN Number: 1077
Proper Shipping Name: PROPYLENE
Class: 2.1 Flammable gas
Subsidiary Risk: None allocated
Packing Group: None allocated
Limitations: Transport on cargo aircraft only

Further transport advice:

Avoid transport on vehicles where load space is not separated from the driver's compartment. Ensure that the 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.

15. REGULATORY INFORMATION

Australian Inventory of Chemical Substances (AICS): All components are listed on the inventory.

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP): Not Scheduled

16. OTHER INFORMATION

This Material Safety Data Sheet has been prepared by Hodson & Associates Pty Ltd on behalf of Irwin Industrial Tool Company Pty Ltd.

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Reasons for Issue: Updated Company telephone contact information.

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