PROPANE

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Propane
Product Code	TX9
Other Names	-
Product Use	General soldering applications
Company Name	Bromic Group
Address	1 Suttor Street Silverwater NSW 2128
Telephone Number	02 9748 3900
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: May cause central nervous system depression, headache, dizziness and drowsiness. Extremely high concentrations can cause asphyxiation and death by displacing oxygen from the atmosphere.
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.

HAZARDOUS SUBSTANCE. DANGEROUS GOODS.
Classified as hazardous according to the criteria of Safe Work Australia.

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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient (common name)	CAS Number	Proportion
Propane	74-98-6	100%

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	When propane fuel is burned efficiently, the by-products of combustion are carbon dioxide and water. Inefficient burning may produce carbon monoxide.
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 is required and full protective equipment. 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 container due to fire.
Hazchem Code	2YE

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions,	Wear Safe Work Australia approved self-contained breathing

Protective Equipment and Emergency Procedures	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	In the event of a major spill, prevent spillage from entering drains or water courses.
Methods and Materials for Containment and Cleaning Up	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. 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 so that each pressure relief valve communicates with the vapour space. 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)	No exposure standards set.
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	Rotten egg odour
Odour Threshold	No information available
pH	No information available
Melting Point / Freezing Point	No information available
Initial Boiling Point / Range	-42°C
Flash Point	-104°C
Evaporation Rate	Not applicable
Flammability	Extremely flammable
Lower Flammability or Explosive Limit	2.1%
Upper Flammability or Explosive Limit	9.5%
Vapour Pressure	127 psig @20°C
Vapour Density	1.5 @ 15.56°C
Relative Density (Specific Gravity)	0.504 @ 15.56°C (liquid)
Solubility in Water	Insoluble
Partition coefficient: n-octanol/water	No information available
Auto-ignition Temperature	450°C
Decomposition Temperature	No information available
Viscosity	No information available

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	No information available.

11. TOXICOLOGICAL INFORMATION

Acute Health Effects		
Skin Corrosion/Irritation	Contact with liquid can cause frostbite	
Serious Eye Damage/Irritation	Contact with liquid can cause freezing of tissue.	
Sensitization	No information available.	
Mutagenicity	No information available.	
Carcinogenicity	This product does not contain any IARC listed chemicals.	
Reproductive Toxicity	None.	
STOT-Single Exposure	No information available.	
STOT-Repeated Exposure	No information available.	
Aspiration Hazard	No information available.	
Routes of Exposure	Inhalation:	May cause central nervous system depression, headache, dizziness and drowsiness. Extremely high concentrations can cause asphyxiation and death by displacing oxygen from the atmosphere.
	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.
Chronic Health Effects	No information available.	
Existing Conditions Aggravated by Exposure	No information available.	

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Bioaccumulation, Persistence and Degradibility	No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods and containers	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 – Spe Provisions	TP33

SEA TRANSPORT – IMDG

UN Number	1075
Proper Shipping Name	PETROLEUM GASES, LIQUEFIED
Dangerous Goods Class	2.1
Packing Group	Not applicable

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 is listed in the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Last Revision of MSDS	Rev 1.0 (14/02/2012)
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)]