



Material Safety Data Sheet

Section 1: Identification of the Material and Supplier

Supplier: Bracton Industries (NSW) Pty. Ltd., ACN: 003 060 160
Address: 50 Chard Road, BROOKVALE NSW 2100, Australia
Tel: +61 2 9938 1800 **Fax:** +61 2 9905 0979
Product Name: Bracton Inhibited Propylene Glycol
Other Names: Propane-1,2-diol solution. Bracton Long Life Glycol
Proper shipping name (ADG Code): Combustible liquid.
Recommended use: As a coolant additive in refrigeration systems. Dilute and use as directed on the product label.
Emergency Phone Number: Transport/Fire Emergency: 000 Medical Emergency: 131126

Section 2: Hazards Identification

Classified as hazardous according to criteria of Worksafe Australia. Non-dangerous goods.

Risk Phrases: R: 36/38 Irritating to skin and eyes.
Safety Phrases: S: 24/25 Avoid contact with skin and eyes.
S: 45 In case of accident or if you feel unwell, seek medical advice immediately

Section 3: Composition/Information on Ingredients

Ingredients: Propane-1,2-diol [57-55-6] > 60 %
Other ingredients deemed not to be hazardous < 10 %
Water [7732-18-5] to 100 %

Section 4: First Aid Measures

For advice, contact a Poisons Information Centre (Phone 131126) or a doctor.

Swallowed: Do not induce vomiting. **Skin:** Remove contaminated clothing and wash skin thoroughly. **Eyes:** Hold eyes open, flood with water for at least 15 minutes and seek medical advice. **Inhaled:** Remove from exposure.

First Aid facilities: Recommended: Eye wash. Hand wash basin.

Advice to Doctor: Product contains a very high proportion of propylene glycol. Irritating to skin and eyes. May be absorbed through damaged skin. On ingestion will have a similar effect as ethanol, about one third as toxic. Contact Poisons Information Centre.

Section 5: Fire Fighting Measures

HAZCHEM Code: None. **Risk of violent reaction or explosion:** No.

Extinguishant: Water fog or fine water spray, alcohol-resistant foam, or dry agents.

Products of combustion: Carbon dioxide, water vapour, propionaldehyde, lactic acid, pyruvic acid, acetic acid. Incomplete combustion may generate carbon monoxide.

Protective Equipment: Breathing apparatus and protective gloves for fire only.

Section 6: Accidental Release Measures

Emergency Procedures: Care: spillages will be slippery. Remove sources of ignition. Contain. Prevent spillages from entering natural waters.

For large spills: Contain spillage using sand or earth. Transfer liquid and solids to suitable container. Treat residues as for small spillage. **For small spills:** If local regulations permit, mop up with plenty of water and run to waste, diluting greatly with running water. Otherwise absorb on inert absorbent, transfer to suitable container and arrange removal by disposals company. Wash site of spillage thoroughly with water and detergent. Ventilate area to dispel any residual vapours.

Section 7: Handling and Storage

Precautions for safe handling: Avoid contact with skin and eyes. Keep away from oxidising agents.

Conditions for safe storage: Store in a cool, well ventilated place, out of reach of children. Large quantities should be stored in a bonded flammables store. Store in original container. Keep container tightly closed and out of direct sunlight. Keep away from naked flames and other sources of ignition. Keep away from oxidising agents. Prevent vapours from collecting in enclosed or low lying places. Protect from physical damage. Clean up all spills and splashes promptly; avoid secondary accidents.

Incompatibles: Oxidising agents, sources of ignition.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards: **ES-TWA:** None assigned. **ES-STEL:** None assigned.

ES-PEAK: None assigned. **Biological Limit Values:** No data.

Engineering Controls: Ensure adequate ventilation (same as outdoors) when using. If handling industrial quantities

or if vapour/aerosol risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible. **Personal Protective Equipment:** Avoid contact with skin and eyes. Do not breathe concentrated vapours or aerosols. Personal protection to be selected from those recommended below, as appropriate to mode of use, quantity handled and degree of hazard: **Normal Use:** Eye/face protection, Gloves. **Industrial Quantities:** Face shield or safety glasses, gloves, plastic apron, boots, impervious overalls.

Section 9: Physical and Chemical Properties

Appearance:	Pink, slightly viscous liquid.	Evaporation Rate:	0.005 (n-butyl acetate = 1
Odour:	Almost odourless.	Solubilities:	Miscible with water
pH:	About neutral.	Specific Gravity:	1.04 g/mL
Vapour Pressure:	10.6 Pa @ 20 °C	Flash Point:	From about 99 °C (c.c.)
Vapour Density:	2.62 (Air = 1)	Flammable Limits:	2.6 - 12.6 %
Boiling Point:	189 °C	Dust Explosion:	Not applicable.
Melting Point:	No data.	Auto-ignition Temperature:	371 °C
Volatiles:	About 5 % (as water)	Other Information:	Hygroscopic.
VOC:	Negligible.		

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: Incompatible materials.

Incompatible Materials: Oxidising agents, acid chlorides, acid anhydrides, chloroformates, hydrofluoric acid, nitric acid, reducing agents, silver nitrate. **Hazardous Decomposition Products:** Propionaldehyde, lactic acid, pyruvic acid, acetic acid, oxides of carbon including carbon monoxide. **Hazardous Reactions:** Contact with strong oxidising agents may cause fire.

Section 11: Toxicological Information

Health Effects: No data available for the mixture. Information presented relates to individual ingredients, i.e. propylene glycol. May cause intoxication, general anaesthesia, stupor, convulsions, changes in surface EEG. Symptoms of overexposure to propylene glycol may include redness, visual impairment, discomfort, lethargy, hypotension, prostration, muscle tenderness, convulsions, coma.

Acute: Swallowed: Will have effects similar to ethanol, but only about one third as toxic. May cause gastrointestinal disturbances, nausea, vomiting, headache. Large doses may cause diarrhoea, central nervous system depression, pulmonary oedema (fluid in the lungs), hypoglycaemia, kidney damage, brain damage, possibly death. Very large doses can be as serious as ethanol poisoning.

Skin: Irritating to skin. Prolonged or repeated skin contact may lead to sensitisation and allergic reactions. May be absorbed directly through damaged or abraded skin.

Eyes: Irritating to eyes. May cause redness, lachrymation, irritation or pain.

Inhaled: Inhalation of vapours or aerosol may cause central nervous system depression, headache, nausea and vomiting, irritation, dizziness, loss of consciousness.

Chronic: Repeated skin contact may cause flaking, softening and tenderness, defatting, dryness and erythema. Chronic ingestion may lead to lactic acidosis and possible seizures. Prolonged exposure may cause blood, kidney or spleen disorders. Propylene glycol has caused reproductive effects and fetal damage in experimental animals (mice).

LD50: Propylene glycol 20,000 mg/kg oral, rat. 22,000 mg/kg oral, mouse.

TDL0: Propylene glycol 79,000 mg/kg/56 weeks - oral, human child - general anaesthesia, changes in surface EEG, convulsions.

Section 12: Ecological Information

Ecotoxicity: No data.

Environmental Fate: No data.

Persistence and degradability: No data.

Bioaccumulative potential: No data.

Mobility: Will be readily transported by water.

Other adverse environmental effects: No data.

Section 13: Disposal Considerations

The generator of any wastes from this product is responsible for its proper classification, transport and disposal. Consult appropriate local and State regulations.

Disposal methods and containers: Avoid (undiluted) disposal to sewer.

Special precautions for landfill or incineration: High temperature incineration may be suitable. May be unsuitable for landfill.

Section 14: Transport Information

UN Number: None assigned.

Special precautions for user: Keep away from oxidising agents.

UN Proper shipping name: Combustible liquid.

HAZCHEM Code: None.

Class and subsidiary risk: None assigned.

Packaging group: None assigned.

Section 15: Regulatory Information

Poisons (SUSDP): Propylene glycol is specifically exempted from scheduling, for all purposes, on the grounds of low toxicity.

Dangerous Goods: Combustible liquid. Treat as dangerous goods when stored or transported with flammable liquids.

Australian Inventory of Chemical Substances (AICS): Listed.

Section 16: Other information

Date of MSDS Update: April 2011