



SAFETY DATA SHEET

Product Name: GLY-PRO™ PG HTF

NON-HAZARDOUS CHEMICAL, NON-DANGEROUS GOODS

Glycol Sales Australia (GSA) encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name:	GLY-PRO™ PG HTF
Company identification:	Glycol Sales Australia PO BOX 136 LILYDALE, VIC 3140
Contact Details:	1300 459 265 info@glycolsales.com.au
Emergency Telephone Number:	For advice, contact a doctor (at once) or the Australian Poisons Information Centre: 131 126 Transport Emergency Only Dial 000

Recommended use:

GLY-PRO™ PG HTF is an industrially inhibited propylene glycol-based heat transfer fluid. GLY-PRO™ PG HTF is a formulation of USP propylene glycol and has a specially designed corrosion inhibitor package. Solutions in water provide freeze protection to below -50°C and burst protection to below -73°C. This product is acceptable for use where there is possibility of incidental food contact. If your intended use is not consistent with the stated use, please contact your sales or technical service representative.

GLY-PRO™ PG HTF recommended temperature range -45°C to 100°C.

Product Name: GLY-PRO™ PG HTF**2. HAZARDS IDENTIFICATION**

Based on available information, this material is not classified as hazardous according to criteria of Safe Work Australia.

Poison Schedule: Not applicable

DANGEROUS GOOD CLASSIFICATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Propylene glycol	57-55-6	~94-95 % (w/w)
Corrosion inhibitor package Ingredients determined to be non-hazardous		<4-6.0% (w/w) Balance

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Breath fresh air. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin Contact: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

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: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

Notes to physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Hazchem Code: Not applicable.

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: Non-combustible material.

Firefighting further advice: Not combustible, however following evaporation of aqueous component

Product Name: GLY-PRO™ PG HTF

residual material can burn if ignited.

6. ACCIDENTAL RELEASE MEASURES**SMALL SPILLS**

Take necessary precautions to prevent skin and eye contamination. Avoid inhalation of vapor. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

LARGE SPILLS

Slippery when spilt. Clean up immediately. Take necessary precautions to prevent skin and eye contamination and the inhalation of 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.

Dangerous Goods – Initial Emergency Response Guide No: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of vapour.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Always keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**National occupational exposure limits:**

	TWA		STEL		NOTICES
	ppm	mg/m ³	ppm	mg/m ³	
Propane-1,2-diol total: (vapor & particulates)	150	474			
Propane-1,2-diol: particulates only	-	10	-	-	-

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15-minute period which should not be exceeded at any time during a normal eight-hour workday.

These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too as low a level as is workable. These 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.

If the directions for use on the product label are followed, exposure of individuals using the product

Product Name: GLY-PRO™ PG HTF

should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator. Vapour heavier than air - prevent concentration in hollows or sumps. Do NOT enter confined spaces where vapour may have collected.

Personal Protection Equipment:

Special Note:

Personal Protective Equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

The selection of PPE is dependent on a full risk assessment. The risk assessment should consider the work situation, physical form of chemical, handling method and volume, environmental factors and area of application.

If the outcome of risk assessment is considerably low, still manufacturer recommends to use minimum PPE stipulated by the chemical industry practices. Ex: Safety Glasses, Impervious Gloves

GLOVES, SAFETY GLASSES



If the handling volume is large and risk of spill exists, wear suitable protective clothing covers unprotected exposed skin area with an overall, safety shoes and a chemical resistant apron at all times to avoid any possible injuries.

Available information suggests that gloves made from natural rubber, nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or reusing.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of vapour. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Base Units:	Litres
Form:	Clear liquid

Product Name: GLY-PRO™ PG HTF

Colour:	Clear
Odour:	Characteristic
Solubility in water: Evaporation Rate: (Butyl Acetate =1) Vapour Pressure: Relative vapour density (air=1) Lower explosion limit: Upper explosion limit:	Completely soluble <0.5 Estimated 2.2 mmHg >1.0 2.6% v/v Propylene glycol 12.5% v/v Propylene glycol
Specific Gravity (20 °C):	1.03 – 1.06
Auto ignition Temperature (°C): Decomposition Temperature (°C): Kinematic Viscosity (20 °C):	371 °C No test data available 43.4 cSt
Freezing Point: Boiling Point (760 mmHg):	Supercools 152°C
pH: Flash Point:	8.60 – 8.95 Closed cup 104 °C Pensky - Martens closed cup ASTM D93 (based on major component).
Explosive Properties: Oxidizing Properties: Partition coefficient (n-octanol/water): Molecular weight:	Open Cup Cleveland open cup ASTM D92 None No data available No data available No data available 76.9 g/mol

(Typical values only - consult specification sheet) N Av = Not available, N App = Not

Chemical stability: This material is thermally stable when stored and used as directed.

10. STABILITY AND REACTIVITY

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible materials: Oxidising agents.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

Hazardous reactions: No known hazardous reactions.

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:

Acute Effects

Inhalation: Material may be an irritant to mucous membranes and respiratory tract.

Product Name: GLY-PRO™ PG HTF

Skin contact: Contact with skin may result in irritation.

Ingestion: Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Eye contact: May be an eye irritant.

Acute toxicity

Inhalation: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >20 mg/L

Skin contact: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg

Ingestion: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg

Corrosion/Irritancy: Eye: this material has been classified as not corrosive or irritating to eyes. Skin: this material has been classified as not corrosive or irritating to skin.

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients) : >100 mg/L

Long-term aquatic hazard: This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log Kow < 4.

Eco toxicity: No information available.

Persistence and degradability: No information available.

Product Name: GLY-PRO™ PG HTF

Bio accumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible, material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

MARINE TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Danger

15. REGULATORY INFORMATION

This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants) The Rotterdam Convention (Prior Informed Consent) Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

This material/constituent(s) is covered by the following requirements:

- All components of this product are listed on or exempt from the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

The information in this safety data sheet (SDS) is believed to be correct as of the date issued. This product was classified according to globally harmonised system of classification and labelling of chemicals (GHS) revision version 07.

Glycol Sales Australia/NZ makes no warranties, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose or course of performance or usage of trade.

User is responsible for determining whether the product is fit for purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of this product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or

Product Name: GLY-PRO™ PG HTF

application.

For this reason, Glycol Sales Australia/NZ always recommends a user perform a test patch or trial in small scale or in an inconspicuous area prior to full application to limit possible damage. Testing before beginning any project is also the best way to ensure product effectiveness.

Glycol Sales Australia/NZ provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, Glycol Sales Australia/NZ makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from Glycol Sales Australia/NZ. It is the user responsibility to ensure they have the most current information available.