

1. IDENTIFICATION

Product Name	Propylene glycol
Other Names	1,2-Propylene glycol; Monopropylene glycol
Uses	Food/pharmaceutical applications; Industrial use.
Chemical Family	No Data Available
Chemical Formula	C3H8O2
Chemical Name	1,2-Propanediol
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)



Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Chemical Entity	Formula	CAS Number	Proportion
Propylene glycol	C3H8O2	57-55-6	<=100 %

4. FIRST AID MEASURES**Description of necessary measures according to routes of exposure**

Swallowed	IF SWALLOWED: Rinse mouth, then drink a glass of water. Get medical advice/attention if you feel unwell.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for 10 - 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Remove contaminated clothing and shoes immediately. Flush skin with running water for several minutes. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention.
Advice to Doctor	Treat symptomatically. Following cases of gross over-exposure, investigation of liver, kidney and eye function may be advisable. Records of such incidents should be maintained for future reference.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Combustible liquid; May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction - Do not use water jets.
Fire and Explosion Hazard	Containers may explode when heated. When heated, vapours may form explosive mixtures with air.
Hazardous Products of Combustion	Fire may produce irritating, toxic and/or corrosive gases, including Carbon oxides.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	104 °C [PMCC]
Lower Explosion Limit	2.6 %
Upper Explosion Limit	12.6 %
Auto Ignition Temperature	>400 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid



breathing vapours and contact with eyes, skin and clothing.

Clean Up Procedures

Absorb with earth, sand or other non-combustible material and transfer to a suitable container for disposal (see SECTION 13).

Containment

Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.

Decontamination

Wash area down with excess water.

Environmental Precautionary Measures

Prevent entry into drains and waterways.

Evacuation Criteria

Spill or leak area should be isolated immediately. Keep unauthorised personnel away.

Personal Precautionary Measures

Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling

Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Combustible liquid: Keep away from heat and sources of ignition - No smoking. Do not pressurise containers to empty.

Storage

Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Avoid exposure to air. Protect from moisture. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).

Container

Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General

For Propane-1,2-diol (CAS No. 57-55-6):
 - Safe Work Australia Exposure Standard (vapour & particulates): TWA = 150 ppm (474 mg/m3).
 - Safe Work Australia Exposure Standard (particulates only): TWA = 10 mg/m3.
 - New Zealand Workplace Exposure Standard (vapour & particulates): TWA = 150 ppm (474 mg/m3).
 - New Zealand Workplace Exposure Standard (particulates only): TWA = 10 mg/m3.

Exposure Limits

No Data Available

Biological Limits

No information available.

Engineering Measures

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protection Equipment

- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Organic vapour/particulate filter respirator (refer to AS/NZS 1715 & 1716).
 - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses or goggles.
 - Hand protection: Handle with gloves. Recommended: Chemical-resistant gloves.
 - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Chemical-resistance workwear, safety shoes.

Special Hazards Precautions

No information available.

Work Hygienic Practices

Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Appearance

Clear liquid

Odour

Odourless

Colour

Colourless



pH	No Data Available
Vapour Pressure	20 Pa (@ 25 °C)
Relative Vapour Density	No Data Available
Boiling Point	184 °C
Melting Point	No Data Available
Freezing Point	<-20 °C
Solubility	Miscible with water 20°C
Specific Gravity	1.03
Flash Point	104 °C [PMCC]
Auto Ignition Temp	>400 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	Hygroscopic.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Combustible liquid; May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, toxic and/or corrosive gases, including Carbon oxides.
Release of Invisible Flammable Vapours and Gases	When heated, vapours may form explosive mixtures with air.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under recommended conditions of storage and handling.
Conditions to Avoid	Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with strong oxidising agents, strong acids, isocyanates.
Hazardous Decomposition Products	Fire/decomposition may produce irritating, toxic and/or corrosive gases, including Carbon oxides.
Hazardous Polymerisation	Hazardous polymerisation will not occur.



11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: No adverse effects expected; large amounts may cause nausea and vomiting. - Eye contact: May cause eye irritation. - Skin contact: May cause skin irritation. - Inhalation: Mist/vapours may cause respiratory irritation. - Chronic effects: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat (male/female): 22,000 mg/kg bw. [ECHA].
Other	Acute toxicity (Dermal): - LD50, Rabbit: >2,000 mg/kg bw. [ECHA].
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (Oncorhynchus mykiss): 40,613 mg/L (96 h) [ECHA].
Persistence/Degradability	Ready biodegradable.
Mobility	No information available.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	Low potential for bioaccumulation.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	No information available.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name	Propylene glycol
Class	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
Subsidiary Risk(s)	No Data Available No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.



Sea Transport

IMDG Code

Proper Shipping Name	Propylene glycol
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Propylene glycol
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	200-338-0
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined



Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes

PRGLYC0032, PRGLYC1000, PRGLYC1001, PRGLYC1002, PRGLYC1003, PRGLYC1004, PRGLYC1005, PRGLYC1009, PRGLYC1010, PRGLYC1011, PRGLYC1012, PRGLYC1013, PRGLYC1020, PRGLYC1100, PRGLYC1101, PRGLYC1200, PRGLYC1300, PRGLYC1700, PRGLYC1800, PRGLYC1801, PRGLYC1802, PRGLYC1803, PRGLYC1804, PRGLYC1805, PRGLYC1806, PRGLYC1807, PRGLYC1808, PRGLYC1809, PRGLYC1810, PRGLYC1811, PRGLYC1812, PRGLYC1813, PRGLYC1814, PRGLYC1815, PRGLYC1816, PRGLYC1817, PRGLYC1818, PRGLYC1819, PRGLYC1820, PRGLYC1821, PRGLYC1822, PRGLYC1823, PRGLYC1824, PRGLYC1825, PRGLYC1900, PRGLYC1950, PRGLYC2000, PRGLYC2600, PRGLYC2800, PRGLYC2900, PRGLYC3000, PRGLYC3001, PRGLYC3002, PRGLYC3010, PRGLYC3011, PRGLYC3020, PRGLYC3029, PRGLYC3030, PRGLYC3033, PRGLYC3035, PRGLYC3036, PRGLYC3037, PRGLYC3038, PRGLYC3039, PRGLYC3100, PRGLYC3101, PRGLYC3102, PRGLYC3200, PRGLYC3201, PRGLYC3202, PRGLYC3203, PRGLYC3300, PRGLYC3400, PRGLYC3500, PRGLYC3501, PRGLYC3800, PRGLYC4000, PRGLYC4001, PRGLYC4002, PRGLYC4003, PRGLYC4500, PRGLYC5000, PRGLYC5001, PRGLYC5002, PRGLYC5100, PRGLYC5200, PRGLYC5300, PRGLYC5400, PRGLYC6000, PRGLYC6001, PRGLYC6002, PRGLYC6100, PRGLYC6200, PRGLYC6201, PRGLYC7000, PRGLYC7001, PRGLYC7500, PRGLYC8000, PRGLYC8400, PRGLYC8401, PRGLYC8402, PRGLYC8403, PRGLYC8404, PRGLYC8405, PRGLYC8406, PRGLYC8407, PRGLYC8408, PRGLYC8409, PRGLYC8410, PRGLYC8411, PRGLYC8412, PRGLYC8413, PRGLYC8414, PRGLYC8415, PRGLYC8416, PRGLYC8417, PRGLYC8418, PRGLYC8419, PRGLYC8420, PRGLYC8421, PRGLYC8422, PRGLYC8423, PRGLYC8424, PRGLYC8425, PRGLYC8426, PRGLYC8500, PRGLYC8501, PRGLYC8502, PRGLYC8503, PRGLYC8504, PRGLYC8505, PRGLYC8506, PRGLYC8507, PRGLYC8508, PRGLYC8509, PRGLYC8510, PRGLYC8511, PRGLYC8512, PRGLYI0500, PRGLYI0600, PRGLYI0700, PRGLYI0800, PRGLYI0900, PRGLYI1000, PRGLYI1001, PRGLYI1002, PRGLYI1003, PRGLYI1004, PRGLYI1005, PRGLYI1006, PRGLYI1007, PRGLYI1008, PRGLYI1009, PRGLYI1010, PRGLYI1011, PRGLYI1100, PRGLYI1200, PRGLYI1300, PRGLYI1400, PRGLYI1800, PRGLYI1900, PRGLYI2000, PRGLYI2100, PRGLYI3000, PRGLYI3001, PRGLYI3002, PRGLYI6000, PRGLYI6030, PRGLYI7000, PRGLYI7001

Revision

4

Revision Date

14 Dec 2018

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO₂ Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre



lb Pound

LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

ltr or **L** Litre

m³ Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH₂O Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight

