

## 1. IDENTIFICATION

**Product Name** Dipropylene glycol (DPG) Other Names Oxybispropanol; Oxydipropanol

Uses Used in the manufacture of unsaturated polyester resins and benzoate plasticisers; Chemical use; Paints and general

solvents; Fragrance.

\*Restrictions on use: Do not add directly to food.

**Chemical Family** No Data Available

**Chemical Formula** C6H14O3

**Chemical Name** Propanol, oxybis-

**Product Description** Mono-constituent substance (organic).

## Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox 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	Suite 13A.03, Menara Summit Persiaran Kewajipan USJ1 47600 UEP Subang Jaya	+60-3-5614-2111

## **Emergency Contact Details**

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

Selangor, Malaysia

Organisation	Location	Telephone
Poisons Information Centre	Australia – Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
National Poison Centre	Malaysia	+60-4-6536-999
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

## 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)

#### Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification NOT hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Dipropylene glycol	C6H14O3	25265-71-8	<=100 %

## 4. FIRST AID MEASURES

#### Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Get medical

advice/attention if large quantities are swallowed or 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 at least 15 minutes. If eye irritation persists, get medical advice/attention. \* Suitable emergency safety shower facility should be immediately

available.

**Skin** IF ON SKIN: Remove and isolate contaminated clothing and shoes. Immediately flush skin with running water and follow

by washing with soap, if available. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and

shoes before reuse. \*Suitable emergency eye wash facility should be immediately available.

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.

\*When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to

the incident, injury and surroundings.

\*Most important symptoms and effects, both acute and delayed: Not considered to be an inhalation hazard under normal conditions of use. Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. No specific hazards under normal use conditions. Skin irritation signs and symptoms may include a burning sensation, redness, or swelling. No specific hazards under normal use

conditions.

Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. No specific hazards under normal use conditions. Ingestion may result in nausea, vomiting and/or diarrhoea. \*Indication of any immediate medical attention and special treatment needed: No information available

Medical Conditions Aggravated by No information available.

**Exposure** 

## **5. FIRE FIGHTING MEASURES**

**General Measures** Evacuate the area of all non-essential personnel. Move containers from fire area if you can do it without risk. Cool

containers with water spray until well after fire is out. Dike fire-control water for later disposal.

**Flammability Conditions** Combustible liquid; May burn but does not ignite readily.

\*Material will not burn unless preheated.

**Extinguishing Media** Use alcohol-resistant foam, water spray or fog for extinction. Dry chemical powder, Carbon dioxide, sand or earth may be

used for small fires only. Do not use water jet.

Fire and Explosion Hazard Containers may explode when heated.

**Hazardous Products of** 

Combustion

Fire may produce irritation and/or toxic gases. Carbon monoxide may be evolved if incomplete combustion occurs.

**Special Fire Fighting Instructions** Contain runoff from fire control or dilution water - Runoff may pollute waterways.

**Personal Protective Equipment** Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only

provide limited protection.

**Flash Point** 130 °C [PMCC]

**Lower Explosion Limit** 2.9 % **Upper Explosion Limit** 12.6 % **Auto Ignition Temperature** 327 - 337 °C **Hazchem Code** No Data Available

**6. ACCIDENTAL RELEASE MEASURES** 

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

breathing vapours and contact with eyes, skin and clothing.

\*Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the

environment occurs or is likely to occur.

**Clean Up Procedures** For large spills (>1 drum), transfer by mechanical means, such as vacuum truck, to a salvage tank for recovery or safe

disposal. For small spills (<1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely (see

SECTION 13).

Containment Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Use appropriate containment to avoid

environmental contamination.

Decontamination Ventilate contaminated area thoroughly. Do not flush away residues with water. Retain as contaminated waste. Contain

run-off from residue, flush and dispose of properly.

**Environmental Precautionary** 

Measures

Prevent entry into drains and waterways. Local authorities should be advised if significant spillages cannot be contained.

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

## 7. HANDLING AND STORAGE

**Handling** Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure

adequate ventilation - Use local exhaust extraction over processing area. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours/spray and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Handle and open container with care. Do not pressurise

drum containers to empty. Do not empty into drains.

\*Handling Temperature: Ambient

**Storage** Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed when not in use. Avoid

contact with air. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10). Must be stored in a diked (bunded) area. Drums should be stacked to a maximum of 3 high.

\*Tanks must be clean, dry and rust-free. Cleaning, inspection and maintenance of storage tanks is a specialist operation,

which requires the implementation of strict procedures and precautions.

**Container** Keep in the original container or suitable material, i.e. Stainless steel, Mild steel, Carbon steel.

\*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.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**General** Contains no substances with occupational exposure limit values.

**Exposure Limits** No Data Available

**Biological Limits** No biological limit allocated.

Engineering Measures Ensure adequate ventilation to control airborne concentrations. 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. \*Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated. The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select

controls based on a risk assessment of local circumstances.

**Personal Protection Equipment** 

- Respiratory protection: No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material (refer to AS/NZS 1715 & 1716).
- Eye/face protection: Wear appropriate eye protection to avoid eye contact. If material is handled such that it could be splashed into eyes, protective eyewear is recommended.
- Hand protection: Handle with gloves. It is good practice to wear chemical resistant gloves. Longer term protection: Nitrile rubber. Incidental contact/Splash protection: PVC, neoprene or nitrile rubber gloves.
- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Skin protection is not ordinarily required beyond standard work clothes. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

**Special Hazards Precaustions** 

Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Ensure that all local regulations regarding handling and storage facilities are followed. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.

**Work Hygienic Practices** 

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking and/or smoking and using the toilet. Routinely wash work clothing and protective equipment to remove contaminants. Launder contaminated clothing before re-use. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

\*Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical StateLiquidAppearanceLiquidOdourOdourlessColourColourless

**pH** 7

Vapour Pressure1.3 Pa (@ 25 °C)Relative Vapour Density4.6 Air = 1Boiling Point227 °CMelting Point-20 °CFreezing Point-20 °C

**Solubility** Completely miscible with water

Specific Gravity 1.023

**Flash Point** 130 °C [PMCC] **Auto Ignition Temp** 327 - 337 °C **Evaporation Rate** No Data Available **Bulk Density** No Data Available **Corrosion Rate** No Data Available **Decomposition Temperature** No Data Available 1.03 g/cm3 Density **Specific Heat** No Data Available **Molecular Weight** 134.17 g/mol **Net Propellant Weight** No Data Available **Octanol Water Coefficient** Pow: 0.462 (21.7 °C)

**Vapour Temperature** 20 °C

**Saturated Vapour Concentration** 

Viscosity Dynamic: 116 mPa.s (25°C) - Kinematic: 118 mm2/s (20°C); 32 mm2/s (40°C) (@ No Data Available)

Volatile Percent No Data Available
VOC Volume No Data Available

**Additional Characteristics** - Surface tension: 71.4 mN/m (22 °C).

- Electrical conductivity:  $>10,000\ pS/m$ . This material is not expected to be a static accumulator.

Potential for Dust Explosion Not applicable.

Fast or Intensely Burning

Characteristics

**Particle Size** 

**Partition Coefficient** 

No information available.

No Data Available

No Data Available No Data Available

Flame Propagation or Burning

**Rate of Solid Materials** 

No information available.

Non-Flammables That Could Contribute Unusual Hazards to a

Contribute -- NO IIIIOIIIIatioii available.

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

Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation. Carbonyl and dioxolane derivatives may be formed.

Release of Invisible Flammable

No information available.

Vapours and Gases

## 10. STABILITY AND REACTIVITY

**General Information** No hazardous reaction is expected when handled and stored according to provisions. Oxidises on contact with air.

Chemical Stability Stable at room temperature and normal pressure.

**Conditions to Avoid** Avoid extremes of temperature and direct sunlight.

Hazardous Decomposition

Products

**Materials to Avoid** 

Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation. Carbonyl and dioxolane derivatives may be

Incompatible/reactive with strong oxidising agents, strong acids, strong bases.

formed.

**Hazardous Polymerisation** No information available.

#### 11. TOXICOLOGICAL INFORMATION

**General Information** Information on toxicological effects:

- Acute toxicity: Not classified

- Skin corrosion/irritation: Mild irritation

Serious eye damage/irritation: Mild irritation
 Respiratory/skin sensitisation: Mild irritation

- Germ cell mutagenicity: Not classified

- Carcinogenicity: Not carcinogenic

Reproductive toxicity: Not classified
 STOT (single exposure): Not classified

- STOT (repeated exposure): Not classified

- Aspiration toxicity: Not classified

Information on possible routes of exposure:

- Ingestion: No specific hazards under normal use conditions. Ingestion may result in nausea, vomiting and/or diarrhoea.

- Eye contact: No specific hazards under normal use conditions. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

- Skin contact: No specific hazards under normal use conditions. Skin irritation signs and symptoms may include a burning sensation, redness, or swelling.

- Inhalation: Not considered to be an inhalation hazard under normal conditions of use. Possible respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Chronic effects: Based on available data, the classification criteria are not met. No carcinogenicity classification (Dipropylene qlycol).

\*Not expected to be a health hazard when used under normal conditions.

Acute

**Ingestion** Acute toxicity (Oral):

- LD50, Rat (male & female): >5,000 mg/kg [US EPA Test Guideline OPP 81-1].

\*Based on available data, the classification criteria are not met.

Other Acute toxicity (Dermal):

- LD50, Rabbit (male & female): >5,000 mg/kg [Other guideline method].

\*Based on available data, the classification criteria are not met.

**Inhalation** Acute toxicity (Inhalation):

- LC50, Rat (male & female): >2.34 mg/L (4 h) (Aerosol) [Other guideline method].

\*Based on available data, the classification criteria are not met.

Carcinogen Category None

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Aquatic Toxicity:

LC50, Fish (Oryzias latipes): > 1,000 mg/l (96 h) [OECD TG 203].

EC50, Aquatic invertebrates (Daphnia magna): >100 mg/l (48 h) [OECD TG 202].

EC50, Algae/aquatic plants (Desmodesmus subspicatus): >100 mg/l (72 h) [OECD TG 201].

Persistence/Degradability Readily biodegradable (84.4 %, 28 d) [OECD Test Guideline 301F].

**Mobility** If the product enters soil, one or more constituents will or may be mobile and may contaminate groundwater.

**Environmental Fate** Prevent entry into drains and waterways.

**Bioaccumulation Potential** Does not bioaccumulate significantly.

- Pow: 0.462 (21.7 °C)

- Bioconcentration factor (BCF): 0.3 - 4.6 (Cyprinus carpio, 42 d) [OECD Test Guideline 305C].

**Environmental Impact** No Data Available

#### 13. DISPOSAL CONSIDERATIONS

**General Information** Recover or recycle if possible. Dispose of waste from residues, spillage or tank cleaning and contaminated packaging via

a recognised collector or contractor and in accordance with local/regional/national regulations. Do not dispose into the

environment, in drains or watercourses.

**Special Precautions for Land Fill** No information available.

#### 14. TRANSPORT INFORMATION

## Land Transport (Australia)

ADG Code

Proper Shipping Name Dipropylene glycol (DPG)

Class C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable

Subsidiary Risk(s) No Data Available

No Data Available

UN NumberNo Data AvailableHazchemNo Data AvailablePack GroupNo Data AvailableSpecial ProvisionNo Data Available

Comments NON-DANGEROUS GOODS: Not regulated for LAND transport.

## Land Transport (Malaysia)

ADR Code

Proper Shipping Name Dipropylene glycol (DPG)

Class No Data Available
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.

## Land Transport (New Zealand)

NZS5433

Proper Shipping Name Dipropylene glycol (DPG)

Class No Data Available
Subsidiary Risk(s) No Data Available

No Data Available No Data Available No Data Available No Data Available

Special Provision No Data Available

Comments NON-DANGEROUS GOODS: Not regulated for LAND transport.

## Land Transport (United States of America)

**US DOT** 

**UN Number** 

**Pack Group** 

Hazchem

Proper Shipping Name Dipropylene glycol (DPG)

Class No Data Available
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 Dipropylene glycol (DPG)

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 Dipropylene glycol (DPG)

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)

## 15. REGULATORY INFORMATION

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

## **Environmental Protection Authority (New Zealand)**

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code HSR002503 - Additives, Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2020.

## **National/Regional Inventories**

Australia (AIIC) Listed

Canada (DSL) Listed

Canada (NDSL) Listed

China (IECSC) Listed

**Europe (EINECS)** 246-770-3

Europe (REACh) Not Determined

Japan (ENCS/METI) Listed

Korea (KECI) Listed

Malaysia (List of Classified Substances) Not Listed

New Zealand (NZIoC) Listed

Philippines (PICCS) Listed

Taiwan (TCSI) Listed

USA (TSCA) Listed

Mexico (INSQ) Listed

## 16. OTHER INFORMATION

Related Product Codes DIPGLY1000, DIPGLY1001, DIPGLY1200, DIPGLY1300, DIPGLY1500, DIPGLY1600, DIPGLY1700, DIPGLY1800,

DIPGLY1900, DIPGLY2000, DIPGLY2001, DIPGLY2002, DIPGLY2003, DIPGLY2004, DIPGLY2100, DIPGLY2101, DIPGLY2102, DIPGLY2103, DIPGLY2104, DIPGLY2200, DIPGLY2201, DIPGLY2300, DIPGLY2400, DIPGLY2500,

DIPGLY2600, DIPGLY2601, DIPGLY2700, DIPGLY3100, DIPGLY4301

Revision 6

**AICS** Australian Inventory of Chemical Substances

atm Atmosphere

**CAS** Chemical Abstracts Service (Registry Number)

cm<sup>2</sup> 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/I 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

inH20 Inch of Water

K Kelvin

kg Kilogram

kg/m3 Kilograms per Cubic Metre

**Ib** 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.

Itr or L Litre

m<sup>3</sup> 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

mmH20 Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

 $\mbox{\bf NIOSH}$  National Institute for Occupational Safety and Health

**NOHSC** National Occupational Heath 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