



# SAFETY DATA SHEET DPGDA REVISION 4, DATE 06 NOV 21

## 1. IDENTIFICATION

<b>Product Name</b>	<b>DPGDA</b>
<b>Other Names</b>	2-Propenoic acid, oxybis(methyl-2,1-ethanediyl)ester; EM222; Oxybis(methyl-2,1-ethanediyl) diacrylate
<b>Uses</b>	UV Coatings; Inks; Adhesives; Photoresists.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	C <sub>12</sub> H <sub>18</sub> O <sub>5</sub>
<b>Chemical Name</b>	Dipropylene glycol, diacrylate
<b>Product Description</b>	No Data Available

### 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	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
Chemcall	Malaysia	+64-4-9179888
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

<b>Hazard Classification</b>		Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	
<b>Hazard Categories</b>		Acute Toxicity (Oral) - Category 5 Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Irritation - Category 1 Sensitisation (Skin) - Category 1	
<b>Pictograms</b>		 	
<b>Signal Word</b>		Danger	
<b>Hazard Statements</b>		<b>H303</b>	May be harmful if swallowed.
		<b>H315</b>	Causes skin irritation.
		<b>H317</b>	May cause an allergic skin reaction.
		<b>H318</b>	Causes serious eye damage.
<b>Precautionary Statements</b>	Prevention	<b>P280</b>	Wear protective gloves/eye protection/face protection.
		<b>P261</b>	Avoid breathing mist/vapours.
		<b>P272</b>	Contaminated work clothing should not be allowed out of the workplace.
	Response	<b>P305 + P351 + P338 + P310</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.
		<b>P302 + P352</b>	IF ON SKIN: Wash with plenty of soap and water.
		<b>P333 + P313</b>	If skin irritation or rash occurs: Get medical attention.
		<b>P362</b>	Take off contaminated clothing.
		<b>P301 + P312</b>	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
	Disposal	<b>P501</b>	Dispose of contents/container in accordance with local / regional / national / international regulations.

## National Transport Commission (Australia)

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

<b>Dangerous Goods Classification</b>	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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## Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

<b>HSNO Classifications</b>	Health Hazards	<b>6.3A</b>	Substances that are irritating to the skin
		<b>6.5B</b>	Substances that are contact sensitisers
		<b>8.3A</b>	Substances that are corrosive to ocular tissue

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients**

Chemical Entity	Formula	CAS Number	Proportion
Dipropylene glycol, diacrylate	C12H18O5	57472-68-1	<=100 %

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

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth, then drink plenty of (lukewarm) water. Do not induce vomiting. Call a Poison Centre or doctor physician if a large quantity is swallowed or if you feel unwell. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Never give anything by mouth to an unconscious person.
<b>Eye</b>	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. Immediately call a Poison Centre or doctor/physician for emergency medical advice.
<b>Skin</b>	IF ON SKIN: Wash with plenty of soap and (lukewarm) water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs, get medical advice/attention. Contaminated work clothing should not be allowed out of the workplace.
<b>Inhaled</b>	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. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	Treat symptomatically. *Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.
<b>Medical Conditions Aggravated by Exposure</b>	May cause an allergic skin reaction, particularly in susceptible individuals and upon repeated exposure.

**5. FIRE FIGHTING MEASURES**

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
<b>Flammability Conditions</b>	May burn but does not ignite readily.
<b>Extinguishing Media</b>	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction.
<b>Fire and Explosion Hazard</b>	High temperatures, inhibitor depletion, accidental impurities or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction, generating heat/pressure. Closed containers may rupture or explode during runaway polymerization.
<b>Hazardous Products of Combustion</b>	Fire may produce irritating and/or toxic fumes, including acrid smoke, Carbon monoxide, Carbon dioxide and other toxic vapours.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may cause pollution.
<b>Personal Protective Equipment</b>	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
<b>Flash Point</b>	>110 °C [Closed cup]
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	No Data Available

**6. ACCIDENTAL RELEASE MEASURES**

<b>General Response Procedure</b>	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames). Do not touch or walk through spilled material. Avoid breathing vapours and contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Absorb with earth, sand or other non-combustible material and transfer to a suitable container for disposal (see SECTION 13).
<b>Containment</b>	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Dike far ahead of large spill for later disposal.
<b>Decontamination</b>	No information available.
<b>Environmental Precautionary Measures</b>	Prevent entry into drains and waterways.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
<b>Personal Precautionary Measures</b>	Use personal protective equipment as required (see SECTION 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	<p>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).</p> <p>*Product may be heated to facilitate handling. Heat product container slowly to 40 °C for not more than 24 hours. Convection ovens or warm water bath (preferred due to more efficient heat transfer) are recommended for heating. Do not use drum heater. An air space, preferably an air bubble flow, should be provided for at all times during heating.</p>
<b>Storage</b>	<p>Store drums above 10 °C and below 32 °C; Bulk storage temperature range: 15 - 27 °C. Store drums away from heat sources, strong oxidisers, radiation and other initiators. Use product within six months of receipt for optimum results. Prevent material from freezing (inhibitor can separate from product as a solid). If material freezes, heat and mix to redistribute the inhibitor. Check inhibitor content often and add inhibitor to bulk liquid if needed.</p>
<b>Container</b>	<p>Keep in the original container. Maintain head space in storage containers to support oxygen requirements of the inhibitor (s). Do not blanket or mix with oxygen free gas.</p>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No national exposure standards are available for this product.
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	<p>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.</p> <p>*Use explosion-proof electrical/ventilating/lighting equipment.</p>
<b>Personal Protection Equipment</b>	<ul style="list-style-type: none"> <li>- Respiratory protection: If material is handled at elevated temperatures or mist forming conditions, wear respiratory protection. Recommended: NIOSH approved (or equivalent) organic vapour/particulate respirator.</li> <li>- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical splash goggles and/or face shield. Contact lenses should not be worn.</li> <li>- Hand protection: Wear protective gloves. Recommended: Nitrile gloves; If product is used with solvents, wear thick (&gt;0.5 mm) Nitrile gloves. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility, etc) is noticed.</li> <li>- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Depending on conditions of use, apron, boot, head and face protection should be worn.</li> </ul>
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke when using this product. Wash hands before eating, drinking, smoking, or using toilet facilities. Shower after work using plenty of soap and water. Promptly remove soiled clothing and wash thoroughly before reuse. Contaminated work clothing should not be allowed out of the workplace.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Mild, musty odour
Colour	Clear
pH	No Data Available
Vapour Pressure	<0.05 mmHg (@ 20 °C)
Relative Vapour Density	No Data Available
Boiling Point	104 °C (@ 0.5 mbar)
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Insoluble in water
Specific Gravity	1.04 - 1.10
Flash Point	>110 °C [Closed cup]
Auto Ignition Temp	No Data Available
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	No information available.
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	May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating and/or toxic fumes, including acrid smoke, Carbon monoxide, Carbon dioxide and other toxic vapours.
Release of Invisible Flammable Vapours and Gases	No information available.

**10. STABILITY AND REACTIVITY**

<b>General Information</b>	This product is inhibited to prevent uncontrolled polymerisation.
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Avoid high temperatures and localised heat sources (e.g. drum or band heaters). Do not blanket or mix with oxygen-free gas. Prevent material from freezing. Avoid direct sunlight and Ultraviolet radiation.
<b>Materials to Avoid</b>	Incompatible/reactive with strong oxidisers, strong reducers, free radical initiators, inert gases, Oxygen scavengers.
<b>Hazardous Decomposition Products</b>	Fire/decomposition may produce irritating and/or toxic fumes, including acrid smoke, Carbon monoxide, Carbon dioxide and other toxic vapours.
<b>Hazardous Polymerisation</b>	High temperatures, inhibitor depletion, accidental impurities or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction, generating heat/pressure.

**11. TOXICOLOGICAL INFORMATION**

<b>General Information</b>	<ul style="list-style-type: none"> <li>- Acute toxicity: May be harmful if swallowed. This material is expected to be a slight ingestion hazard.</li> <li>- Skin corrosion/irritation: Causes skin irritation. Symptoms may include localised redness/rash and swelling of the affected area. Symptoms may be delayed. A more severe skin response may occur after prolonged contact with this material.</li> <li>- Eye damage/irritation: Causes serious eye damage. Symptoms may include burning sensation, tearing, redness and swelling.</li> <li>- Respiratory/skin sensitisation: May cause an allergic skin reaction (sensitisation), particularly in susceptible individuals and upon repeated exposure.</li> <li>- Germ cell mutagenicity: No information available.</li> <li>- Carcinogenicity: No information available.</li> <li>- Reproductive toxicity: No information available.</li> <li>- STOT (single exposure): No significant signs or symptoms indicative of any adverse health hazard are expected to occur at standard conditions due to the low volatility of this material. However, aerosols, or vapours which may be generated at elevated processing temperatures, may cause respiratory tract irritation. Symptoms may include coughing, mucous production and shortness of breath.</li> <li>- STOT (repeated exposure): No information available.</li> <li>- Aspiration toxicity: No information available.</li> </ul>
<b>Acute</b>	
<b>Ingestion</b>	Acute toxicity (Oral): - LD50, Rat: 4,600 mg/kg [Supplier's SDS].
<b>Carcinogen Category</b>	None

**12. ECOLOGICAL INFORMATION**

<b>Ecotoxicity</b>	No information available.
<b>Persistence/Degradability</b>	No information available.
<b>Mobility</b>	No information available.
<b>Environmental Fate</b>	Prevent entry into drains and waterways.
<b>Bioaccumulation Potential</b>	No information available.
<b>Environmental Impact</b>	No Data Available

**13. DISPOSAL CONSIDERATIONS**

**General Information**

Residues and spilled material may be hazardous waste due to potential for internal heat generation - Disposal must be in accordance with local/regional/national regulations.

**Special Precautions for Land Fill**

Contaminated packaging: The container for this product can present explosion or fire hazard, even when emptied. To avoid risk of injury, do not cut, puncture or weld on or near this container. Since the emptied containers retain product residue, follow label warnings even after container is emptied.

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

ADG Code

<b>Proper Shipping Name</b>	DPGDA
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Land Transport (Malaysia)**

ADR Code

<b>Proper Shipping Name</b>	DPGDA
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Land Transport (New Zealand)**

NZS5433

<b>Proper Shipping Name</b>	DPGDA
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Land Transport (United States of America)**

US DOT

<b>Proper Shipping Name</b>	DPGDA
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Sea Transport**

IMDG Code

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

**Air Transport**

IATA DGR

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

**National Transport Commission (Australia)**

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

<b>Dangerous Goods Classification</b>	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**

<b>General Information</b>	No Data Available
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Poisons Schedule (Aust)

Not Scheduled

**Environmental Protection Authority (New Zealand)**

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code

HSR002670  
HSR003526 (Revoked)**National/Regional Inventories**

Australia (AIIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	Listed
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	Listed
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	MONOMQ1000, MONOMQ1001, MONOMQ1100, MONOMQ1110, MONOMQ3000, MONOMQ5000, MONOMQ5100, MONOMQ9000
Revision	4
Revision Date	06 Nov 2021
Key/Legend	<p>&lt; Less Than &gt; Greater Than</p> <p><b>AICS</b> Australian Inventory of Chemical Substances  <b>atm</b> Atmosphere  <b>CAS</b> Chemical Abstracts Service (Registry Number)  <b>cm<sup>2</sup></b> Square Centimetres  <b>CO<sub>2</sub></b> Carbon Dioxide  <b>COD</b> Chemical Oxygen Demand  <b>deg C (°C)</b> Degrees Celcius</p>

**EPA (New Zealand)** Environmental Protection Authority of New Zealand

**deg F (°F)** Degrees Fahrenheit

**g** Grams

**g/cm<sup>3</sup>** 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 insoluble in each other.

**inHg** Inch of Mercury

**inH<sub>2</sub>O** Inch of Water

**K** Kelvin

**kg** Kilogram

**kg/m<sup>3</sup>** Kilograms per Cubic Metre

**lb** Pound

**LC<sub>50</sub>** LC stands for lethal concentration. LC<sub>50</sub> 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.

**LD<sub>50</sub>** LD stands for Lethal Dose. LD<sub>50</sub> 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

**m<sup>3</sup>** Cubic Metre

**mbar** Millibar

**mg** Milligram

**mg/24H** Milligrams per 24 Hours

**mg/kg** Milligrams per Kilogram

**mg/m<sup>3</sup>** Milligrams per Cubic Metre

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

**mm** Millimetre

**mmH<sub>2</sub>O** 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