



SAFETY DATA SHEET OXIPURITY 4014 U REVISION 3, DATE 05 NOV 19

1. IDENTIFICATION

Product Name	OXIPURITY 4014 U
Other Names	PEG-1450; PEG-32; Polyethylene Glycol 1450 USP; Polyethylenoglycol 1450; Polyglycol 1450; Ultra PEG 1450
Uses	Industrial use.
Chemical Family	No Data Available
Chemical Formula	(C ₂ H ₄ O) _n H ₂ O
Chemical Name	Polyethylene glycol
Product Description	Mixture of polyethylenoglycols. *The exact percentage (concentration) of composition has been withheld as a trade secret.

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

Redox Ltd
Corporate Office Sydney
Locked Bag 15 Minto NSW 2566 Australia
2 Swettenham Road Minto NSW 2566 Australia
All Deliveries: 4 Holmes Road Minto NSW 2566 Australia

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Australia
Adelaide
Brisbane
Melbourne
Perth
Sydney

New Zealand
Auckland
Christchurch
Hawke's Bay
UK
London

Malaysia
Kuala Lumpur
USA
Los Angeles
Oakland
Mexico
Saltillo



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)
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Polyethylene glycol	(C2H4O) _n H2O	25322-68-3	60 - 100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Get medical advice/attention if you feel unwell. Do not induce vomiting without medical advice. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Never give anything by mouth to an unconscious person.
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.
Skin	IF ON SKIN: Remove and isolate contaminated clothing and shoes. Flush skin with plenty of running water, preferably under a shower. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
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. Apply resuscitation if victim is not breathing - Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically.
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	Not flammable; May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), alcohol-resistant foam or water spray for extinction. Water jets should not be used directly on igniting products because it may disperse the material and intensify the fire. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

*CAUTION: Use of water spray when fighting fire may be inefficient.

Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	In case of combustion, it may generate toxic fumes, 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	>250 °C [Closed cup]
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	310 °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 inhalation of vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Pick up and transfer to properly labelled containers for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
Decontamination	Clean contaminated objects and areas thoroughly, observing environmental regulations.
Environmental Precautionary Measures	Prevent product from entering into soil and waterways. Notify the competent authorities if the product has run into drainage systems or watercourse or has contaminated the ground or vegetation.
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 inhalation of vapours/aerosols and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place. Protect from sunlight. Keep container closed when not in use. Avoid exposure to air or moisture over prolonged periods. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from incompatible materials (see SECTION 10). *The product can be stored in tanks, in liquid state, at temperatures slightly over 60 °C, where it must be maintained at inert gas atmosphere.
Container	Keep in the original container or suitable packaging materials, i.e. polypropylene, stainless steel 304/307, stainless steel 316. Unsuitable: Copper, zinc (galvanized steel) and zinc alloys.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	In closed environments, this product should be handled keeping proper exhaust (general diluter or local exhaust).

Personal Protection Equipment	<ul style="list-style-type: none"> - Respiratory protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, respiratory protection may be required. Recommended: In case of exposure to vapours/aerosols, wear face mask with organic vapour cartridge. In case of emergency or contact with high concentrations of the product, wear an air supplied mask or self contained breathing apparatus (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Wear safety glasses with side shields (or goggles). - Hand protection: Handle with gloves. Recommended: PVC (polyvinyl chloride); Rubber gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: PVC apron; Protective shoes or boots.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Solid
Odour	Odourless
Colour	White
pH	5 - 7 (5% sol'n)
Vapour Pressure	<0.0467 kPa (@ No Data Available)
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	ca. 33 - 48 °C
Freezing Point	No Data Available
Solubility	Soluble in water
Specific Gravity	No Data Available
Flash Point	>250 °C [Closed cup]
Auto Ignition Temp	310 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.121000 g/cm ³
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	-2.3
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	28 cSt (@ 98 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	Hygroscopic.
Potential for Dust Explosion	No information available.

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	Not flammable; May burn but does not ignite readily.
Reactions That Release Gases or Vapours	In case of combustion/decomposition, it may generate toxic fumes, including Carbon oxides.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid extremes of temperature, direct sunlight and exposure to air or moisture over prolonged periods. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
Materials to Avoid	Incompatible/reactive with acids, strong oxidizing agents, combustible material.
Hazardous Decomposition Products	In case of combustion/decomposition, it may generate toxic fumes, including Carbon oxides.
Hazardous Polymerisation	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none">- Acute toxicity: Low toxicity. Ingestion in large amounts may cause nausea, vomiting and diarrhoea.- Skin corrosion/irritation: It is unlikely that exposure to small amounts for short periods, will have any irritant or toxic effect. It can be absorbed through the skin and cause mild irritation. Based on available data, the classification criteria are not met. Mild irritation (Rabbit, 24 h).- Eye damage/irritation: May cause mild irritation. Based on available data, the classification criteria are not met. Mild irritation (Rabbit, 24 h).- Respiratory/skin sensitisation: No information available.- Germ cell mutagenicity: No classification is proposed, based on conclusive negative data.- Carcinogenicity: Based on available data, the classification criteria are not met.- Reproductive toxicity: Based on available data, the classification criteria are not met.- STOT (single exposure): Due to low vapor pressure, is unlikely to cause inhalation problems at room temperature. Vapours from the liquid at high temperatures, or mist of the product in high concentrations, may cause irritation of the respiratory system.- STOT (repeated exposure): Based on available data, the classification criteria are not met.- Aspiration toxicity: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat: 22 - 28 g/kg (Polyethylene glycol).
Other	Acute toxicity (Dermal): - LD50, Rabbit: >20 g/kg (Polyethylene glycol).
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (Carassius auratus): >20,000 mg/L (96 h).
Persistence/Degradability	Not readily biodegradable (56.2% by BOD MITI Test).
Mobility	It is expected to have high mobility in soil (log Koc: -1.532).
Environmental Fate	Not considered to be harmful to aquatic life.
Bioaccumulation Potential	It is not expected to bioaccumulate in the environment.
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	Do not reuse empty containers.

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

ADG Code

Proper Shipping Name	OXIPURITY 4014 U
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 (Malaysia)

ADR Code

Proper Shipping Name	OXIPURITY 4014 U
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	OXIPURITY 4014 U
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 (United States of America)

US DOT

Proper Shipping Name	OXIPURITY 4014 U
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	OXIPURITY 4014 U
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	OXIPURITY 4014 U
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

Not Hazardous

National/Regional Inventories**Australia (AIC)**

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)

Listed

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	POETGL1450, POETGL4014
Revision	3
Revision Date	05 Nov 2019
Reason for Issue	SDS updated
Key/Legend	<p>< Less Than</p> <p>> Greater Than</p> <p>AICS Australian Inventory of Chemical Substances</p> <p>atm Atmosphere</p> <p>CAS Chemical Abstracts Service (Registry Number)</p> <p>cm² Square Centimetres</p> <p>CO₂ Carbon Dioxide</p> <p>COD Chemical Oxygen Demand</p> <p>deg C (°C) Degrees Celcius</p> <p>EPA (New Zealand) Environmental Protection Authority of New Zealand</p> <p>deg F (°F) Degrees Farenheit</p> <p>g Grams</p> <p>g/cm³ Grams per Cubic Centimetre</p> <p>g/l Grams per Litre</p> <p>HSNO Hazardous Substance and New Organism</p> <p>IDLH Immediately Dangerous to Life and Health</p> <p>immiscible Liquids are insoluable in each other.</p> <p>inHg Inch of Mercury</p> <p>inH₂O Inch of Water</p> <p>K Kelvin</p> <p>kg Kilogram</p> <p>kg/m³ Kilograms per Cubic Metre</p> <p>lb Pound</p> <p>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.</p> <p>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.</p> <p>ltr or L Litre</p> <p>m³ Cubic Metre</p> <p>mbar Millibar</p> <p>mg Milligram</p> <p>mg/24H Milligrams per 24 Hours</p> <p>mg/kg Milligrams per Kilogram</p> <p>mg/m³ Milligrams per Cubic Metre</p> <p>Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.</p> <p>mm Millimetre</p> <p>mmH₂O Millimetres of Water</p> <p>mPa.s Millipascals per Second</p> <p>N/A Not Applicable</p> <p>NIOSH National Institute for Occupational Safety and Health</p> <p>NOHSC National Occupational Heath and Safety Commission</p> <p>OECD Organisation for Economic Co-operation and Development</p> <p>Oz Ounce</p> <p>PEL Permissible Exposure Limit</p> <p>Pa Pascal</p> <p>ppb Parts per Billion</p> <p>ppm Parts per Million</p> <p>ppm/2h Parts per Million per 2 Hours</p> <p>ppm/6h Parts per Million per 6 Hours</p> <p>psi Pounds per Square Inch</p> <p>R Rankine</p> <p>RCP Reciprocal Calculation Procedure</p> <p>STEL Short Term Exposure Limit</p> <p>TLV Threshold Limit Value</p> <p>tne Tonne</p> <p>TWA Time Weighted Average</p> <p>ug/24H Micrograms per 24 Hours</p> <p>UN United Nations</p> <p>wt Weight</p>

