



# SAFETY DATA SHEET

## EO/PO BLOCK COPOLYMER PE61

### REVISION 5, DATE 16 SEP 19

## 1. IDENTIFICATION

<b>Product Name</b>	<b>EO/PO Block Copolymer PE61</b>
<b>Other Names</b>	Ethylene glycol, propylene glycol, polymer; Ethylene oxide, propylene oxide, polymer; Poloxalene; Polyethylene glycol, propoxylated
<b>Uses</b>	Surfactant.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	(C <sub>3</sub> H <sub>6</sub> O.C <sub>2</sub> H <sub>4</sub> O) <sub>x</sub>
<b>Chemical Name</b>	Oxirane, methyl-, polymer with oxirane
<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

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

Phone +61 2 9733 3000  
Fax +61 2 9733 3111  
E-mail [sydney@redox.com](mailto:sydney@redox.com)  
Web [www.redox.com](http://www.redox.com)  
ABN 92 000 762 345

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

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

## 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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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

## Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Oxirane, methyl-, polymer with oxirane	(C3H6O.C2H4O)x	9003-11-6	<=100 %

## 4. FIRST AID MEASURES

## Description of necessary measures according to routes of exposure

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth with water, then give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical advice/attention if you feel unwell. 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. If eye irritation persists, get medical advice/attention.
<b>Skin</b>	IF ON SKIN: Remove contaminated clothing and shoes immediately. Flush skin with running water/shower. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
<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.
<b>Advice to Doctor</b>	Treat symptomatically. Contact a poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Medical Conditions Aggravated by Exposure</b>	No information available.

## 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. 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>	Combustible liquid; May burn but does not ignite readily.
<b>Extinguishing Media</b>	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction - Do not use water jet.

<b>Fire and Explosion Hazard</b>	In a fire or if heated, a pressure increase will occur and the container may burst. Flame might be invisible in daylight.
<b>Hazardous Products of Combustion</b>	Fire may produce irritating and/or toxic fumes, including Carbon oxides.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
<b>Personal Protective Equipment</b>	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
<b>Flash Point</b>	>150 °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>	No action shall be taken involving any personal risk or without suitable training. Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilt material - Slippery when spilt. Avoid accidents, clean up immediately. Avoid breathing vapours and contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Move containers from spill area. Wash spillages into an effluent treatment plant or Contain and collect spillage with non-combustible, absorbent material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in container for disposal according to local regulations (see SECTION 13).
<b>Containment</b>	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
<b>Decontamination</b>	Wash area down with excess water.
<b>Environmental Precautionary Measures</b>	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.
<b>Personal Precautionary Measures</b>	Use personal protective equipment as required (see SECTION 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	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/aerosols and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed and sealed until ready for use. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat and sources of ignition - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10). Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations.
<b>Container</b>	Keep in the original container. Do not store in unlabelled containers. Do not store in copper or copper alloy containers.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No value assigned to this material by the Australian regulatory authority.
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.

**Engineering Measures**

No special ventilation requirements. 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: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator (Refer to AS/NZS 1715 and 1716).
- Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts (Refer to AS/NZS 1337). Recommended: Chemical splash goggles.
- Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary (Refer to AS/NZS 2161). Recommended: Rubber gloves.
- Skin/body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Protective work clothing and safety shoes.

**Special Hazards Precautions**

No information available.

**Work Hygienic Practices**

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State</b>	Liquid
<b>Appearance</b>	Liquid
<b>Odour</b>	Characteristic
<b>Colour</b>	Clear or hazy
<b>pH</b>	5 - 7.5 (2.5% w/w)
<b>Vapour Pressure</b>	<0.1 hPa (@ 20 °C)
<b>Relative Vapour Density</b>	>1 Air = 1
<b>Boiling Point</b>	>200 °C
<b>Melting Point</b>	<0 °C
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Insoluble in (cold) water - Soluble in methanol
<b>Specific Gravity</b>	1.02
<b>Flash Point</b>	>150 °C [Closed cup]
<b>Auto Ignition Temp</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	No Data Available
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	338 mPa.s (@ No Data Available)

<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	Hygroscopic - absorbs moisture or water from surrounding air.
<b>Potential for Dust Explosion</b>	Not applicable.
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No information available.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No information available.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	Combustible liquid; May burn but does not ignite readily.
<b>Reactions That Release Gases or Vapours</b>	Combustion/decomposition products may include: Carbon dioxide, Carbon monoxide.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	Hydrolyses on exposure to strong acids.
<b>Chemical Stability</b>	Product is stable under normal conditions.
<b>Conditions to Avoid</b>	Avoid extreme heat and sources of ignition.
<b>Materials to Avoid</b>	Incompatible/reactive with strong acids and oxidising agents.
<b>Hazardous Decomposition Products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Fire may produce irritating and/or toxic fumes, including Carbon oxides.
<b>Hazardous Polymerisation</b>	Under normal conditions of storage and use, hazardous reactions will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	Information on possible routes of exposure: <ul style="list-style-type: none"><li>- Ingestion: No adverse effects expected; however, large amounts may cause nausea and vomiting.</li><li>- Eye contact: A mild eye irritant.</li><li>- Skin contact: Contact with skin may result in irritation.</li><li>- Inhalation: Breathing in mists or aerosols may produce respiratory irritation.</li></ul> Chronic effects: No information available.
<b>Acute</b>	
<b>Ingestion</b>	Acute toxicity (Oral): <ul style="list-style-type: none"><li>- LD50, Rat: 3,800 mg/kg (Polyoxyethylene polyoxypropylene block copolymer).</li><li>- LD50, Mouse: &gt;2,000 mg/kg [Supplier's SDS].</li></ul>
<b>Carcinogen Category</b>	None

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Aquatic toxicity (Polyoxyethylene polyoxypropylene block copolymer): <ul style="list-style-type: none"><li>- Acute IC50, Bacteria: &gt;100 mg/l (24 h).</li><li>- Acute LC50, Fish: 203 mg/l (96 h).</li></ul>
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<b>Persistence/Degradability</b>	Not readily biodegradable (<70 %, 28 days) [AS 4351.2: Biodegradability - organic compounds in an aqueous medium].
<b>Mobility</b>	No information available.
<b>Environmental Fate</b>	No known significant effects or critical hazards. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
<b>Bioaccumulation Potential</b>	No information available.
<b>Environmental Impact</b>	No Data Available

### 13. DISPOSAL CONSIDERATIONS

<b>General Information</b>	The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
<b>Special Precautions for Land Fill</b>	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way.

### 14. TRANSPORT INFORMATION

#### Land Transport (Australia)

ADG Code

<b>Proper Shipping Name</b>	EO/PO Block Copolymer PE61
<b>Class</b>	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
<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>	EO/PO Block Copolymer PE61
<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>	EO/PO Block Copolymer PE61
<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>	EO/PO Block Copolymer PE61
<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>	EO/PO Block Copolymer PE61
<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>	EO/PO Block Copolymer PE61
<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)

**Dangerous Goods Classification**

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road &amp; 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 Listed

**China (IECSC)**

Listed

**Europe (EINECS)**

618-355-0

**Europe (REACH)**

Pre-registered substance

**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)**

Listed

**USA (TSCA)**

Listed

**16. OTHER INFORMATION**



# SAFETY DATA SHEET EO/PO BLOCK COPOLYMER PE61 REVISION 5, DATE 16 SEP 19

## Related Product Codes

SUFPEB1000, SUFPEB1010, SUFPEB1020, SUFPEB1100, SUFPEB1101, SUFPEB1500, SUFPEB1510, SUFPEB1800, SUFPEB1801, SUFPEB1802, SUFPEB1803, SUFPEB1804, SUFPEB1805, SUFPEB1806, SUFPEB1807, SUFPEB1808, SUFPEB1809, SUFPEB1900, SUFPEB1910, SUFPEB2000, SUFPEB2500, SUFPEB2501, SUFPEB2800, SUFPEB2810, SUFPEB3000, SUFPEB3010, SUFPEB4000, SUFPEB5000, SUFPEB6000, SUFPEB6001, SUFPEB6060, SUFPEB7000, SUFPEB8000, SUFPEB8001

## Revision

5

## Revision Date

16 Sep 2019

## Key/Legend

< Less Than

> Greater Than

**AICS** Australian Inventory of Chemical Substances

**atm** Atmosphere

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

**cm<sup>2</sup>** Square Centimetres

**CO<sub>2</sub>** 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/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 insoluable 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 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