

### 1. IDENTIFICATION

|                            |  |
|----------------------------|--|
| <b>Product Name</b>        | <b>Polysorbate 80</b>  |
| <b>Other Names</b>         | Polyethylene Glycol, Sorbitan Monooleate; Polysorbate 81; Sorbitan Monooleate, Polyoxyethylene Derivatives; Sorbitan, mono-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivatives, (Z)- |
| <b>Uses</b>                | Nonionic Surfactant, Emulsifier  |
| <b>Chemical Family</b>     | No Data Available  |
| <b>Chemical Formula</b>    | Unspecified  |
| <b>Chemical Name</b>       | Polysorbate 80   |
| <b>Product Description</b> | No Data Available  |

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

| Organisation            | Location   | Telephone       |
|-------------------------|--|-----------------|
| Redox Pty Ltd           | 2 Swettenham Road<br>Minto NSW 2566<br>Australia   | +61-2-97333000  |
| Redox Pty Ltd           | 11 Mayo Road<br>Wiri Auckland 2104<br>New Zealand  | +64-9-2506222   |
| Redox Inc.              | 3960 Paramount Boulevard<br>Suite 107<br>Lakewood CA 90712<br>USA  | +1-424-675-3200 |
| Redox Chemicals Sdn Bhd | Level 2, No. 8, Jalan Sapir 33/7<br>Seksyen 33, Shah Alam Premier Industrial Park<br>40400 Shah Alam<br>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<br>131126                      |
| Chemcall                   | Australia    | 1800-127406<br>+64-4-9179888               |
| Chemcall                   | Malaysia     | +64-4-9179888                              |
| Chemcall                   | New Zealand  | 0800-243622<br>+64-4-9179888               |
| National Poisons Centre    | New Zealand  | 0800-764766                                |
| CHEMTREC                   | USA & Canada | 1-800-424-9300 CN723420<br>+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   |   |  |
| <b>Signal Word</b>              | Warning  |   |  |
| <b>Hazard Statements</b>        | <b>H303</b>  | May be harmful if swallowed.  |  |
| <b>Precautionary Statements</b> | Prevention   | <b>P264</b>   | Wash hands thoroughly after handling.                                      |
|                                 | Response   | <b>P270</b>   | Do not eat, drink or smoke when using this product.                        |
|                                 |  | <b>P301 + P312</b>  | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. |
|                                 |  | <b>P312</b>   | Call a POISON CENTER or doctor/physician if you feel unwell.               |
| Disposal                        | <b>P330</b>  | Rinse mouth.  |  |
|                                 | <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 & 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 |
|-------------------------|-------------------|------------|------------|
| POE Sorbitan Monooleate | No Data Available | 9005-65-6  | >99.0 %    |

## 4. FIRST AID MEASURES

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

|  |  |
|--|--|
| <b>Swallowed</b>                                 | If the victim is unconscious or spasm, do not feed any food. Induce vomiting.<br>If the patient is conscious, give them water and seek medical advice. |
| <b>Eye</b>                                       | Lift eyelids and flush eye with running warm water for 15 minutes. Obtain medical attention.   |
| <b>Skin</b>                                      | Immediately wash skin with running warm water for 20 minutes. Remove contaminated clothing, shoes and leather accessories.                             |
| <b>Inhaled</b>                                   | Remove from exposure or move to well-ventilated area.  |
| <b>Advice to Doctor</b>                          | Treat symptomatically based on individual reactions of patient and judgement of doctor.  |
| <b>Medical Conditions Aggravated by Exposure</b> | No information available on medical conditions which are aggravated from exposure to this product.   |

## 5. FIRE FIGHTING MEASURES

|                                |   |
|--------------------------------|---|
| <b>General Measures</b>        | If safe to do so, remove containers from the path of fire.      |
| <b>Flammability Conditions</b> | Product is a combustible liquid. Not really ignited.            |
| <b>Extinguishing Media</b>     | Small fires-foam, dry chemical, carbon dioxide and water spray. |
|                                | Large fires- water fog, fine water spray or foam.               |
|                                | Flame might be invisible in daylight.                           |

## **Hazardous Products of Combustion**

### **Special Fire Fighting Instructions**

Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

### **Personal Protective Equipment**

Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit.

### **Flash Point**

>170 °C Closed Cup

### **Lower Explosion Limit**

No Data Available

### **Upper Explosion Limit**

No Data Available

### **Auto Ignition Temperature**

No Data Available

### **Hazchem Code**

No Data Available

## **6. ACCIDENTAL RELEASE MEASURES**

### **General Response Procedure**

Eliminate all sources of ignition. Increase ventilation. Stop leak if safe to do so. Avoid walking through spilled product as it may be slippery. Use clean, non-sparking tools and equipment.

### **Clean Up Procedures**

Soak up spilled product using absorbent non-combustible material such as sand or soil. Avoid using sawdust or cellulose. When saturated, collect the material and transfer to a suitable, labelled chemical waste container and dispose of promptly.

### **Containment**

Stop leak if safe to do so.

### **Environmental Precautionary Measures**

Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.

### **Evacuation Criteria**

Evacuate all unnecessary personnel.

### **Personal Precautionary Measures**

Personnel involved in the clean up should wear full protective clothing as listed in section 8.

## **7. HANDLING AND STORAGE**

### **Handling**

Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours.

### **Storage**

Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials including oxidizing agents and sources of ignition. Protect from direct sun- light, moisture and static discharges. This product is classified as a 'C2' Combustible Liquid for the purpose of storage and handling in accordance with the requirements of AS1940.

### **Container**

Store in original packaging as approved by manufacturer.

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **General**

No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC).

### **Exposure Limits**

No Data Available

### **Biological Limits**

No information available on biological limit values for this product.

### **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**

RESPIRATOR: Wear an effective dust mask where dusts/vapours are generated and engineering controls are inadequate (AS1715/1716).

EYES: Safety glasses with side shields (AS1336/1337).

HANDS: Wear rubber or PVC gloves (AS2161).

CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).

Work Hygienic Practices No Data Available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |                                       |
|---|---------------------------------------|
| <b>Physical State</b>   | Liquid                                |
| <b>Appearance</b>   | Liquid                                |
| <b>Odour</b>  | Odour of fatty acid                   |
| <b>Colour</b>   | No Data Available                     |
| <b>pH</b>   | 5 - 7 1%                              |
| <b>Vapour Pressure</b>  | No Data Available                     |
| <b>Relative Vapour Density</b>  | No Data Available                     |
| <b>Boiling Point</b>  | >200 °C                               |
| <b>Melting Point</b>  | No Data Available                     |
| <b>Freezing Point</b>   | No Data Available                     |
| <b>Solubility</b>   | Soluble in water                      |
| <b>Specific Gravity</b>   | 1.060~1.090                           |
| <b>Flash Point</b>  | >170 °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>                                      | >200 °C                               |
| <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>  | No Data Available                     |
| <b>Volatile Percent</b>   | No Data Available                     |
| <b>VOC Volume</b>   | No Data Available                     |
| <b>Additional Characteristics</b>                                     | No Data Available                     |
| <b>Potential for Dust Explosion</b>                                   | Product is a liquid.                  |
| <b>Fast or Intensely Burning Characteristics</b>                      | No Data Available                     |
| <b>Flame Propagation or Burning Rate of Solid Materials</b>           | No Data Available                     |
| <b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b> | No Data Available                     |
| <b>Properties That May Initiate or Contribute to Fire Intensity</b>   | No Data Available                     |
| <b>Reactions That Release Gases or Vapours</b>                        | No Data Available                     |
| <b>Release of Invisible Flammable Vapours and Gases</b>               | Flame might be invisible in daylight. |

## 10. STABILITY AND REACTIVITY

|   |   |
|---|---|
| <b>General Information</b>              | Combustible liquid.   |
| <b>Chemical Stability</b>               | Product is stable under recommended conditions of use, storage and temperature.           |
| <b>Conditions to Avoid</b>              | Avoid excessive heat, static discharges, direct sunlight, moisture and high temperatures. |
| <b>Materials to Avoid</b>               | Avoid contact with strong acid and oxidizing agents.                                      |
| <b>Hazardous Decomposition Products</b> | No dangerous decomposition products known.  |
| <b>Hazardous Polymerisation</b>         | Hazardous Polymerisation has not been reported.   |

## 11. TOXICOLOGICAL INFORMATION

|                            |  |
|----------------------------|--|
| <b>General Information</b> | No Data Available  |
| <b>EyeIrritant</b>         | Eye contact may result in irritation.                                |
| <b>Ingestion</b>           | No adverse effects, but large amounts may cause nausea and vomiting. |
| <b>Inhalation</b>          | Inhalation of mist may cause irritation.                             |
| <b>SkinIrritant</b>        | Skin contact may result in slight irritation.                        |
| <b>Carcinogen Category</b> | No Data Available  |

## 12. ECOLOGICAL INFORMATION

|                                  |   |
|----------------------------------|---|
| <b>Ecotoxicity</b>               | No ecological information available for this product.         |
| <b>Persistence/Degradability</b> | BOD- not available.<br>COD- not available.                    |
| <b>Mobility</b>                  | Dispersion in water   |
| <b>Environmental Fate</b>        | Do NOT let product reach waterways, drains and sewers.        |
| <b>Bioaccumulation Potential</b> | No information available on bioaccumulation for this product. |
| <b>Environmental Impact</b>      | No Data Available   |

## 13. DISPOSAL CONSIDERATIONS

|  |   |
|--|---|
| <b>General Information</b>               | Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. |
| <b>Special Precautions for Land Fill</b> | Contact a specialist disposal company or the local waste regulator for advice.  |

## 14. TRANSPORT INFORMATION

### Land Transport (Australia)

ADG Code

|                             |  |
|-----------------------------|--|
| <b>Proper Shipping Name</b> | POLYOXYETHYLENE SORBITAN MONOOLEATE  |
| <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 |

#### Land Transport (Malaysia)

ADR

|                             |                                     |
|-----------------------------|-------------------------------------|
| <b>Proper Shipping Name</b> | POLYOXYETHYLENE SORBITAN MONOOLEATE |
| <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                   |

#### Land Transport (New Zealand)

NZS5433

|                             |                                     |
|-----------------------------|-------------------------------------|
| <b>Proper Shipping Name</b> | POLYOXYETHYLENE SORBITAN MONOOLEATE |
| <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                   |

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

US DOT

|                             |                                     |
|-----------------------------|-------------------------------------|
| <b>Proper Shipping Name</b> | POLYOXYETHYLENE SORBITAN MONOOLEATE |
| <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                   |

#### Sea Transport

IMDG Code

|                             |                                     |
|-----------------------------|-------------------------------------|
| <b>Proper Shipping Name</b> | POLYOXYETHYLENE SORBITAN MONOOLEATE |
| <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                   |

**Marine Pollutant** No

#### **Air Transport**

IATA DGR

**Proper Shipping Name** POLYOXYETHYLENE SORBITAN MONOOLEATE  
**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

#### **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 (AICS)** Listed  
**Canada (DSL)** Not Determined  
**Canada (NDSL)** Not Determined  
**China (IECSC)** Not Determined  
**Europe (EINECS)** 500-019-9  
**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

|   |                |
|---|----------------|
| <b>Switzerland (Inventory of Notified Substances)</b> | Not Determined |
| <b>Taiwan (NCSR)</b>                                  | Not Determined |
| <b>USA (TSCA)</b>                                     | Not Determined |

## 16. OTHER INFORMATION

|                              |  |
|------------------------------|--|
| <b>Related Product Codes</b> | POLSOE0500, POLSOE0501, POLSOE1000, POLSOE1001, POLSOE1002, POLSOE1003, POLSOE1004, POLSOE1100, POLSOE1111, POLSOE1112, POLSOE2700, POLSOE5100   |
| <b>Revision</b>              | 4  |
| <b>Revision Date</b>         | 12 Jan 2016  |
| <b>Reason for Issue</b>      | SDS Updated  |
| <b>Key/Legend</b>            | <p>&lt; Less Than<br/>&gt; Greater Than</p> <p><b>AICS</b> Australian Inventory of Chemical Substances<br/> <b>atm</b> Atmosphere<br/> <b>CAS</b> Chemical Abstracts Service (Registry Number)<br/> <b>cm<sup>2</sup></b> Square Centimetres<br/> <b>CO<sub>2</sub></b> Carbon Dioxide<br/> <b>COD</b> Chemical Oxygen Demand<br/> <b>deg C (°C)</b> Degrees Celcius<br/> <b>EPA (New Zealand)</b> Environmental Protection Authority of New Zealand<br/> <b>deg F (°F)</b> Degrees Farenheit<br/> <b>g</b> Grams<br/> <b>g/cm<sup>3</sup></b> Grams per Cubic Centimetre<br/> <b>g/l</b> Grams per Litre<br/> <b>HSNO</b> Hazardous Substance and New Organism<br/> <b>IDLH</b> Immediately Dangerous to Life and Health<br/> <b>immiscible</b> Liquids are insoluable in each other.<br/> <b>inHg</b> Inch of Mercury<br/> <b>inH<sub>2</sub>O</b> Inch of Water<br/> <b>K</b> Kelvin<br/> <b>kg</b> Kilogram<br/> <b>kg/m<sup>3</sup></b> Kilograms per Cubic Metre<br/> <b>lb</b> Pound<br/> <b>LC<sub>50</sub></b> 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.<br/> <b>LD<sub>50</sub></b> 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.<br/> <b>ltr</b> or <b>L</b> Litre<br/> <b>m<sup>3</sup></b> Cubic Metre<br/> <b>mbar</b> Millibar<br/> <b>mg</b> Milligram<br/> <b>mg/24H</b> Milligrams per 24 Hours<br/> <b>mg/kg</b> Milligrams per Kilogram<br/> <b>mg/m<sup>3</sup></b> Milligrams per Cubic Metre<br/> <b>Misc</b> or <b>Miscible</b> Liquids form one homogeneous liquid phase regardless of the amount of either component present.<br/> <b>mm</b> Millimetre<br/> <b>mmH<sub>2</sub>O</b> Millimetres of Water<br/> <b>mPa.s</b> Millipascals per Second<br/> <b>N/A</b> Not Applicable<br/> <b>NIOSH</b> National Institute for Occupational Safety and Health<br/> <b>NOHSC</b> National Occupational Health and Safety Commission<br/> <b>OECD</b> Organisation for Economic Co-operation and Development<br/> <b>Oz</b> Ounce<br/> <b>PEL</b> Permissible Exposure Limit<br/> <b>Pa</b> Pascal<br/> <b>ppb</b> Parts per Billion<br/> <b>ppm</b> Parts per Million<br/> <b>ppm/2h</b> Parts per Million per 2 Hours<br/> <b>ppm/6h</b> Parts per Million per 6 Hours<br/> <b>psi</b> Pounds per Square Inch<br/> <b>R</b> Rankine<br/> <b>RCP</b> Reciprocal Calculation Procedure<br/> <b>STEL</b> Short Term Exposure Limit</p> |



**TLV** Threshold Limit Value  
**tne** Tonne  
**TWA** Time Weighted Average  
**ug/24H** Micrograms per 24 Hours  
**UN** United Nations  
**wt** Weight