## 1. IDENTIFICATION

| | |
|---|---|
| **Product Name** | **Cyanuric acid** |
| **Other Names** | Isocyanuric acid |
| **Uses** | Chlorine stabiliser; precursor/component of bleaches (whitening agent); reagents; disinfectants and herbicides. |
| **Chemical Family** | No Data Available |
| **Chemical Formula** | C3H3N3O3 |
| **Chemical Name** | 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione |
| **Product Description** | 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)** Schedule 5

### 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) |

**Environmental Protection Authority (New Zealand)**
Hazardous Substances and New Organisms Amendment Act 2015

| | | | |
|---|---|---|---|
| **HSNO Classifications** | Health Hazards | **6.4A** | Substances that are irritating to the eye |

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

***Ingredients***

| Chemical Entity | Formula | CAS Number | Proportion |
|---|---|---|---|
| Cyanuric acid | C3H3N3O3 | 108-80-5 | <=100 % |

## 4. FIRST AID MEASURES

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

| | |
|---|---|
| **Swallowed** | IF SWALLOWED: Rinse mouth, then drink a glass of water. Do not induce vomiting. Get medical advice/attention. 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: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention. |
| **Inhaled** | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing until recovered. 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** | Non-combustible material (may be combustible at high temperature). |
| **Extinguishing Media** | If material is involved in a fire, use dry chemical, Carbon dioxide ($CO_2$), foam or water spray for extinction. |
| **Fire and Explosion Hazard** | Decomposes on heating, emitting toxic fumes. |
| **Hazardous Products of Combustion** | Fire may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, isocyanic acid and cyanide gas. |

| | |
|---|---|
| **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) in combination with normal firefighting clothing (full fire kit). |
| **Flash Point** | No Data Available |
| **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** | Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing. |
| **Clean Up Procedures** | Collect material (sweep or vacuum up) and place it in suitable, properly labelled containers for disposal (see SECTION 13). Avoid generating dust. |
| **Containment** | Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. |
| **Decontamination** | Flush area with water to remove any residue. |
| **Environmental Precautionary Measures** | Prevent entry into drains and waterways. |
| **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 dust formation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). To avoid thermal decomposition, do not overheat. |
| **Storage** | Store in a cool, dry and well-ventilated place. Keep container tightly closed. Protect from moisture (hygroscopic). Keep away from foodstuffs and incompatible materials (see SECTION 10). |
| **Container** | Keep in the original container. |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|---|---|
| **General** | No value assigned for this specific material by Safe Work Australia. For dusts from solid substances without specific occupational exposure standards:<br>- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m3, measured as inhalable dust.<br>- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m3; TWA = 3 mg/m3 (respirable). |
| **Exposure Limits** | No Data Available |
| **Biological Limits** | No information available. |
| **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** | - Respiratory protection: Wear respiratory protection in case of inadequate ventilation or an inhalation risk exists. Recommended: Dust mask/particulate respirator (refer to AS/NZS 1715 & 1716).<br>- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses.<br>- Hand protection: Handle with gloves. Recommended: Impervious gloves.<br>- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes. |
| **Special Hazards Precaustions** | No information available. |

| | |
|---|---|
| **Work Hygienic Practices** | Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Take off contaminated clothing and wash before reuse. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical State** | Solid |
| **Appearance** | Crystalline, powder or granular |
| **Odour** | Odourless |
| **Colour** | White |
| **pH** | >=4.0 (1% soln.) |
| **Vapour Pressure** | No Data Available |
| **Relative Vapour Density** | No Data Available |
| **Boiling Point** | No Data Available |
| **Melting Point** | 320 - 360 °C (Decomposes) |
| **Freezing Point** | No Data Available |
| **Solubility** | 0.27 g/100 ml water 25°C |
| **Specific Gravity** | 1.75 - 2.5 |
| **Flash Point** | No Data Available |
| **Auto Ignition Temp** | No Data Available |
| **Evaporation Rate** | No Data Available |
| **Bulk Density** | No Data Available |
| **Corrosion Rate** | No Data Available |
| **Decomposition Temperature** | >=320 °C |
| **Density** | 1.75 - 2.5 g/cm3 |
| **Specific Heat** | No Data Available |
| **Molecular Weight** | 129.07 g/mol |
| **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** | 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** | Non-combustible material (may be combustible at high temperature). |
| **Reactions That Release Gases or Vapours** | Fire/thermal decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, isocyanic acid and cyanide gas. |
| **Release of Invisible Flammable Vapours and Gases** | No information available. |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **General Information** | No information available. |
| **Chemical Stability** | Stable under normal storage and handling conditions. |
| **Conditions to Avoid** | Avoid dust formation. Protect from moisture. Avoid overheating. |
| **Materials to Avoid** | Incompatible/reactive with oxidising agents. |
| **Hazardous Decomposition Products** | Fire/thermal decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides, isocyanic acid and cyanide gas. |
| **Hazardous Polymerisation** | No information available. |

## 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| **General Information** | Information on possible routes of exposure:<br>- Ingestion: No adverse effects expected; may cause abdominal pain, nausea and vomiting.<br>- Eye contact: Mildly irritating to the eyes.<br>- Skin contact: May cause mild skin irritation.<br>- Inhalation: May cause slight respiratory tract irritation, cough, sore throat.<br>Chronic effects: Ingestion in large amounts may cause effects on the kidneys; This may result in tissue lesions. |
| ***Acute*** | |
| **Ingestion** | Acute toxicity (Oral):<br>- LD50, Rat (male/female): >5,000 mg/kg bw. |
| **Inhalation** | Acute toxicity (Inhalation):<br>- LC50, Rat (male/female): >5.25 mg/L (4 h). |
| **Other** | Acute toxicity (Dermal):<br>- LD50, Rabbit (male/female): >5,000 mg/kg bw. |
| **Carcinogen Category** | None |

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| **Ecotoxicity** | No information available. |
| **Persistence/Degradability** | No information available. |
| **Mobility** | No information available. |
| **Environmental Fate** | Prevent entry into drains and waterways. |
| **Bioaccumulation Potential** | No information available. |
| **Environmental Impact** | No Data Available |

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| **General Information** | Recycle to process, if possible or dispose of (contents/container) in accordance with local/regional/national regulations. |
| **Special Precautions for Land Fill** | Dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. |

## 14. TRANSPORT INFORMATION

**Land Transport (Australia)**
ADG Code

| | |
|---|---|
| **Proper Shipping Name** | Cyanuric acid |
| **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** | Cyanuric acid |
| **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** | Cyanuric acid |
| **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** | Cyanuric acid |
| **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** | Cyanuric acid |
| **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** | Cyanuric acid |
| **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)** | Schedule 5 |

### Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

| | |
|---|---|
| **Approval Code** | HSR007179 |

### National/Regional Inventories

| | |
|---|---|
| **Australia (AICS)** | Listed |
| **Canada (DSL)** | Listed |
| **Canada (NDSL)** | Not Determined |

| | |
|---|---|
| **China (IECSC)** | Not Determined |
| **Europe (EINECS)** | Not Determined |
| **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 |
| **Switzerland (Inventory of Notified Substances)** | Not Determined |
| **Taiwan (NCSR)** | Not Determined |
| **USA (TSCA)** | Listed |

## 16. OTHER INFORMATION

| | |
|---|---|
| **Related Product Codes** | CYACID0100, CYACID0101, CYACID0110, CYACID0115, CYACID0116, CYACID0200, CYACID0202, CYACID0210, CYACID0211, CYACID0215, CYACID0220, CYACID0300, CYACID0303, CYACID0410, CYACID0500, CYACID0900, CYACID0901, CYACID1000, CYACID1001, CYACID1002, CYACID1003, CYACID1004, CYACID1005, CYACID1006, CYACID1007, CYACID1008, CYACID1009, CYACID1010, CYACID1011, CYACID1012, CYACID1013, CYACID1014, CYACID1015, CYACID1016, CYACID1017, CYACID1018, CYACID1019, CYACID1020, CYACID1021, CYACID1023, CYACID1024, CYACID1025, CYACID1035, CYACID1100, CYACID1101, CYACID1800, CYACID1801, CYACID1802, CYACID1803, CYACID1804, CYACID1805, CYACID1806, CYACID1807, CYACID2000, CYACID2001, CYACID2002, CYACID2003, CYACID2004, CYACID2400, CYACID2401, CYACID2500, CYACID2501, CYACID2600, CYACID2601, CYACID2602, CYACID3000, CYACID3001, CYACID3002, CYACID3500, CYACID3600, CYACID3601, CYACID3700, CYACID4000, CYACID4400, CYACID4500, CYACID4501, CYACID4502, CYACID4520, CYACID4600, CYACID4700, CYACID4701, CYACID4702, CYACID4715, CYACID4800, CYACID5000, CYACID5001, CYACID6000, CYACID7001, CYACID7025, CYACID7040, CYACID8100, CYACID9100, CYACID9101, CYACID9200, CYACID9201, CYACID9300, CYACID9301, CYACID9400, ISCYAC1000, ISCYAC1001 |
| **Revision** | 3 |
| **Revision Date** | 10 Feb 2018 |
| **Reason for Issue** | Update SDS |
| **Key/Legend** | **<** Less Than<br>**>** Greater Than<br>**AICS** Australian Inventory of Chemical Substances<br>**atm** Atmosphere<br>**CAS** Chemical Abstracts Service (Registry Number)<br>**cm²** Square Centimetres<br>**CO2** Carbon Dioxide<br>**COD** Chemical Oxygen Demand<br>**deg C (°C)** Degrees Celcius<br>**EPA (New Zealand)** Environmental Protection Authority of New Zealand<br>**deg F (°F)** Degrees Farenheit<br>**g** Grams<br>**g/cm³** Grams per Cubic Centimetre<br>**g/l** Grams per Litre<br>**HSNO** Hazardous Substance and New Organism<br>**IDLH** Immediately Dangerous to Life and Health<br>**immiscible** Liquids are insoluable in each other.<br>**inHg** Inch of Mercury<br>**inH2O** Inch of Water<br>**K** Kelvin<br>**kg** Kilogram<br>**kg/m³** Kilograms per Cubic Metre |

**lb** 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.
**ltr** or **L** Litre
**$m^3$** Cubic Metre
**mbar** Millibar
**mg** Milligram
**mg/24H** Milligrams per 24 Hours
**mg/kg** Milligrams per Kilogram
**$mg/m^3$** Milligrams per Cubic Metre
**Misc** or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
**mm** Millimetre
**mmH2O** 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