A: 43 Clapham Road, Regents Park NSW 2143
P: (02) 9645 4433
F: (02) 9645 4030
E: info@chlorinediscounters.com.au
W: www.chlorinediscounters.com.au

# *SAFETY DATA SHEET – Trichloroisocyanuric Acid*

## 1. IDENTIFICATION

| | |
|---|---|
| **Revision Date** | July 2023 (*valid for 5 years from this date)* |
| **Product Name** | TRICHLOROISOCYANURIC ACID, DRY |
| **Other Names** | TRICHLORO-S-TRIAZINETRIONE; TCCA |
| **Uses** | Swimming pool disinfectant, bactericide, algaecide. |
| **Contact Information** | Chlorine Discounters<br>Address: 43 Clapham Road, Regents Park NSW 2143<br>P: 02-96454433<br>F: 02-96454030<br>E: info@chlorinediscounters.com.au<br>W: www.chlorinediscounters.com.au |
| **Emergency Contact** | Managing Director or Operations Manager |

## 2. HAZARD IDENTIFICATION

| | |
|---|---|
| **Poisons Schedule (Aust)** | No Data Available |
| **Globally Harmonised System** | |
| **Hazard Classification** | Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) |
| **Hazard Categories** | Oxidising Solids - Category 2<br>Acute Toxicity (Oral) - Category 4<br>Serious Eye Damage/Irritation - Category 2A<br>Specific Target Organ Toxicity (Single Exposure) - Category 3<br>Acute Hazard To The Aquatic Environment - Category 1<br>Long-term Hazard To The Aquatic Environment - Category 1 |

**Pictograms**



| | | |
|---|---|---|
| **Signal Word** | Danger | |
| **Hazard Statements** | H272 | May intensify fire; oxidizer. |
| | H302 | Harmful if swallowed. |
| | H319 | Causes serious eye irritation. |
| | H335 | May cause respiratory irritation. |
| | H410 | Very toxic to aquatic life with long lasting effects. |
| **Precautionary Statements** | | |
| **Prevention** | P210 | Keep away from heat. |
| | P221 | Take any precaution to avoid mixing with combustibles. |
| | P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| | P264 | Wash hands thoroughly after handling. |
| | P270 | Do not eat, drink or smoke when using this product. |
| | P271 | Use only outdoors or in a well-ventilated area. |
| | P273 | Avoid release to the environment. |
| | P280 | Wear protective gloves/eye protection/face protection. |
| **Response** | P301 + P312 | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. |
| | P304 + P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| | P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| | P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| | P330 | Rinse mouth. |
| | P337 + P313 | If eye irritation persists: Get medical advice/attention. |
| | P370 + P378 | In case of fire: Use dry chemical, alcohol resistant foam or dry sand for extinction. |
| | P391 | Collect spillage. |
| **Storage** | P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
| | P405 | Store locked up. |
| **Disposal** | P501 | 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** | | 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 | CAS Number | Proportions (%) |
|---|---|---|
| TRICHLOROISOCYANURIC ACID | [87-90-1] | > 90.0 |
| WATER | [7732-18-5] | < 0.5 |

# 4. FIRST AID MEASURES

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

**Swallowed** — Seek medical aid immediately. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupful's of milk or water.

**Eye** — Seek immediate medical attention. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

**Skin** — Seek medical aid. Remove contaminated clothing and shoes. Flush skin with plenty of water for at least 15 minutes.

**Inhaled** — Seek medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth to mouth method. Induce artificial respiration with the aid of a pocket mask equipped with a one way valve or other proper respiratory medical device.

**Advice to Doctor** — Treat symptomatically based on judgement of doctor and individual reactions of patient. Probable mucosal damage may contraindicate the use of gastric lavage. Chronic: May cause liver and kidney damage. Effects may be delayed.

**Medical Conditions Aggravated by Exposure** — No information available on medical conditions aggravated by exposure to this product.

# 5. FIRE FIGHTING MEASURES

**General Measures** — 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 move cargo if cargo has been exposed to heat.

**Flammability Conditions** — Strong oxidizer. Contact with other material may cause fire. Contact with acid or acid fumes evolves heat and flammable vapours. Some oxidizers may react explosively with hydrocarbons (fuel). May accelerate burning if involved in a fire.

**Extinguishing Media** — Contact professional fire-fighters immediately. Use water with caution and in flooding amounts.

For small fires: USE WATER ONLY. Do NOT use dry chemicals, carbon dioxide, halon or foams.
For large fires flood fire with water from a distance.

**Fire and Explosion Hazard** — Containers may explode when heated.

**Hazardous Products of Combustion** — During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

| | |
|---|---|
| **Special Fire Fighting Instructions** | HAZCHEM: 1W. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment. Dam fire control water for later disposal. |
| **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** | 225 °C |
| **Lower Explosion Limit** | No Data Available |
| **Upper Explosion Limit** | No Data Available |
| **Auto Ignition Temperature** | No Data Available |
| **Hazchem Code** | 1W |

## 6. ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| **General Response Procedure** | Avoid accidents, clean up immediately. Slippery when spilled. Eliminate all sources of ignition. Increase ventilation. Avoid generating dusty conditions. Use clean, non-sparking tools and equipment. Keep combustibles away from spilled material. |
| **Clean Up Procedures** | Contain and sweep/shovel up spills with dust binding material. Do not use combustible materials such as paper towels to clean up spill. Transfer to a suitable, labelled container and dispose of promptly as hazardous waste. |
| **Containment** | Stop leak if safe to do so. Isolate the danger area. |
| **Environmental Precautionary Measures** Management. | Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste |
| **Evacuation Criteria** | Evacuate all unnecessary personnel. |
| **Personal Precautionary Measures** | Do NOT touch damaged containers or spilled material unless wearing appropriate 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. Use with adequate ventilation. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid ingestion and inhalation. Minimize dust generation and accumulation. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Avoid prolonged or repeated exposure. Never add water to this product, always add product to large quantities of water. Chlorine may be found in slight amount in the head space of containers of TCCA Product. |
| **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 as listed in section 10. Keep away from heat, sparks, and flame. Do not store near combustible materials. Corrosives area. Keep away from acids. Store protected from moisture. Avoid creation of dust. Wash thoroughly after handling. This product has a UN classification of 2468 and a Dangerous Goods Class 5.1 (Oxidiser) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail. |
| **Container** | Store in original packaging as approved by manufacturer. Chlorine may be found in slight amount in the head space of containers of TCCA Product. |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|---|---|
| **General** | Chlorine may be found in slight amounts in the head space of containers of this product. No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m3 (for inspirable dust) and 3mg/m3 (for respirable dust). |
| **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. Adequate ventilation should be provided so that exposure limits are not exceeded. |
| **Personal Protection Equipment** | RESPIRATOR: Wear an approved N95 dust/fume/mist respirator if vapours are generated and engineering controls are inadequate (AS1715/1716).<br>EYES: Wear appropriate protective eyeglasses or chemical safety goggles (AS1336/1337).<br>HANDS: Wear appropriate gloves to prevent skin exposure (AS2161).<br>CLOTHING: Wear appropriate clothing to prevent skin exposure (AS3765/2210). |
| **Work Hygienic Practices** | Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical State** | Solid |
| **Odour** | Chlorine odour |
| **Appearance** | Crystalline powder, granules, or tablets |
| **Colour** | White |
| **pH** | 3 - 3.5 1% solution @ 25 deg C |
| **Flash Point** | 225 °C |
| **Decomposition Temperature** | 225 °C |
| **Molecular Weight** | 232.41 |
| **Melting Point** | 249 - 251 °C |
| **Solubility** | 1.2 g / 100 g 25°C |
| **Octanol Water Coefficient** | No Data Available |
| **Potential for Dust Explosion** | No Data Available |
| **Fast or Intensely Burning Characteristics** | Containers may explode when heated. Some oxidizers may react explosively with hydrocarbons (fuel). |
| **Flame Propagation or Burning Rate of Solid Materials** | May accelerate burning if involved in a fire. |
| **Non-Flammables That Could Contribute Unusual Hazards to a Fire** | Strong oxidizer. Contact with other material may cause fire. |
| **Reactions That Release Gases or Vapours** | Contact with acid or acid fumes evolves heat and flammable vapours. |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **General Information** | Oxidising Solid. |
| **Chemical Stability** | Product is stable under normal conditions of use, storage and temperature. |
| **Conditions to Avoid** | Ignition sources, dust generation, excess heat, exposure to moist air or water. |
| **Materials to Avoid** | Acids, combustible materials, reducing agents, strong oxidants, moisture, reducing agents, acids (mineral, non- oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulphuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid). |
| **Hazardous Decomposition Products** | Hydrogen chloride, nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. |
| **Hazardous Polymerisation** | Will not polymerise. |

## 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| **General Information** | CAS# 87-90-1: XZ1925000 LD50/LC50:<br>Draize test, rabbit, eye: 500 mg Severe;<br>Draize test, rabbit, skin: 500 mg/24H Moderate;<br>Oral, rat: LD50 = 406 mg/kg.<br><br>Carcinogenicity: Trichloroisocyanuric Acid - Not listed by ACGIH, IARC, or NTP. |
| **Eye Irritant** | Irritating to eyes. May cause conjunctivitis. May cause permanent corneal opacification. |
| **Ingestion** | Harmful if swallowed. May cause liver and kidney damage. May cause nausea, vomiting, and diarrhoea, possibly with blood. Chronic: May cause liver and kidney damage. Effects may be delayed. |
| **Inhalation** | Irritating to eyes and respiratory system. Causes respiratory tract irritation. May cause acute pulmonary oedema, asphyxia, chemical pneumonitis, and upper airway obstruction caused by oedema. |
| **Skin Irritant** | May cause severe irritation and possible burns. |
| **Carcinogen Category** | No Data Available |

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| **Eco-toxicity** | This material is believed to be highly toxic to aquatic life.<br>0.20-0.40 mg/L 96 hours LC50 Bluegill Sunfish<br>0.08-0.37mg/L 96 hours LC50 Rainbow Trout. |
| **Persistence/Degradability** | This material is subject to hydrolysis, cyanuric acid produced by hydrolysis is biodegradable |
| **Mobility** | No Data Available |
| **Environmental Fate** | Do NOT let product reach waterways, drains and sewers. |
| **Bioaccumulation Potential** | This material is believed not to bio-accumulate. |
| **Environmental Impact** | No Data Available |

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| **General Information** | 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. |
| **Special Precautions for Land Fill** | Contact a specialist disposal company or the local waste regulator for advice. Use or reuse if possible. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction and fire. DO NOT transport wet or damaged material. |

## 14. TRANSPORT INFORMATION

**Land Transport (Australia)**

ADG Code

| | |
|---|---|
| **UN Number** | 2468 |
| **Shipping Name** | TRICHLOROISOCYANURIC ACID, DRY |
| **Dangerous Goods Class** | 5.1 Oxidising Agent (not an organic peroxide) |
| **Subsidiary Risk** | Not applicable. |
| **Pack Group** | II |
| **Precaution for User** | OXIDIZING HARMFUL DANGEROUS FOR THE ENVIRONMENT |
| **Hazchem Code** | 1W |
| **EPG** | 31 OXIDIZING SUBSTANCES |
| **Special Provision** | Not applicable. |




**National Transport Commission (Australia)** Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

**Dangerous Goods Classification** 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)** | No Data Available |
| **National/Regional Inventories** | |
| **Australia (AICS)** | Listed |

# 16. OTHER INFORMATION

| | |
|---|---|
| **Literature References** | No data available. |
| **Sources for Data** | No data available. |

**Legend to Abbreviations and Acronyms**

| | |
|---|---|
| **<** | less than |
| **<** | greater than |
| **ADG** | Australian Dangerous Goods Code |
| **AICS** | Australian Inventory of Chemical Substances |
| **CAS** | Chemical Abstracts Service (Registry Number) |
| **cm2** | square centimetres |
| **CO2** | Carbon Dioxide |
| **COD** | Chemical Oxygen Demand |
| **deg C ( 'C )** | degrees Celsius |
| **ERMA** | Environmental Risk Management Authority |
| **g** | gram |
| **g/cm3** | grams per cubic centimetre |
| **g/l** | grams per litre |
| **HSNO** | Hazardous Substance and New Organism |
| **IATA** | International Air Transport Association Dangerous Goods Regulations |
| **IDLH** | Immediately Dangerous to Life and Health |
| **IMDG** | International Maritime Dangerous Goods Code |
| **Immiscible** | liquids are insoluble in each other |
| **Kg** | kilogram |
| **kg/m3** | kilograms per cubic metre |
| **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** | Litre |
| **m3** | cubic metre |
| **mbar** | millibar |

| | |
|---|---|
| **mg** | milligram |
| **mg/24H** | milligrams per 24 hours |
| **mg/kg** | milligrams per kilogram |
| **mg/m3** | milligrams per cubic metre |
| **Misc** | miscible |
| **Miscible** | liquids form one homogeneous liquid phase regardless of the amount of either component present |
| **mm** | millimetre |
| **mPa.s** | milli Pascal per second |
| **N/A** | Not Applicable |
| **NOHSC** | National Occupational Health and Safety Commission |
| **OECD** | Organization for Economic Co-operation and Development |
| **PEL** | Permissible Exposure Limit |
| **ppb** | parts per billion |
| **ppm** | parts per million |
| **ppm/2h** | parts per million per 2 hours |
| **ppm/6h** | parts per million per 6 hours |
| **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 (number) |
| **wt** | weight |

This SDS summarises Chlorine Discounters best knowledge of the health and safety hazard information of the selected substance and how to safely handle the selected substance in the workplace however Chlorine Discounters expressly disclaims that the SDS is a representation or guarantee of the chemical specifications for the substance.

Each user should read the SDS and consider the information in the context of how the selected substance will be handled and used in the workplace including its use in conjunction with other substances.