

# Safety Data Sheet



## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** TRICHLOROISOCYANURIC ACID

**Other name(s):** TICA, Stabilised pool chlorine tablets, Trichloroisocyanuric acid tablets, Trichlor, Trichloro-s-triazine trione, Trichloro-1,3,5-triazine trione

**Recommended Use of the Chemical and Restrictions on Use** Bleaching, sanitising, pool chemical.

**Supplier:** Ixom Operations Pty Ltd  
**ABN:** 51 600 546 512  
**Street Address:** Level 8, 1 Nicholson Street  
East Melbourne Victoria 3002  
Australia

**Telephone Number:** +61 3 9906 3000  
**Emergency Telephone:** 1 800 033 111 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

### Classification of the chemical:

Oxidising solids - Category 2  
Acute Oral Toxicity - Category 4  
Eye Irritation - Category 2A  
Specific target organ toxicity (single exposure) - Category 3

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:

Acute Aquatic Toxicity - Category 1  
Chronic Aquatic Toxicity - Category 1

**SIGNAL WORD:** DANGER



### Hazard Statement(s):

H272 May intensify fire; oxidizer.  
H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

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## Precautionary Statement(s):

### Prevention:

P210 Keep away from heat, sparks, open flames, hot surfaces. No smoking.  
P220 Keep and store away from clothing, incompatible materials, combustible materials.  
P221 Take any precaution to avoid mixing with combustibles / incompatible materials.  
P261 Avoid breathing dust.  
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.  
P280 Wear protective gloves / protective clothing / eye protection / face protection.

### Response:

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P330 Rinse mouth.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
P370+P378 In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish.

### Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

### Disposal:

P501 Dispose of contents and container in accordance with local, regional, national, international regulations.

### Other Hazards:

AUH031 Contact with acids liberates toxic gas.

**Poisons Schedule (SUSMP):** S6 Poison.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

| Components                | CAS Number | Proportion | Hazard Codes                     |
|---------------------------|------------|------------|----------------------------------|
| Trichloroisocyanuric acid | 87-90-1    | >99%       | H272 H302 H319 H335<br>H400 H410 |

## 4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once.

### Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discoloration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

### Skin Contact:

If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance. Launder contaminated clothing before reuse.

Product Name: TRICHLOROISOCYANURIC ACID  
Substance No: 000031021401

Issued: 31/08/2015  
Version: 5

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## Eye Contact:

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

## Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Get to a doctor or hospital quickly.

## Indication of immediate medical attention and special treatment needed:

Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

### Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Water spray (large quantities).

### Hazchem or Emergency Action Code: 1W

### Specific hazards arising from the chemical:

Oxidizing substance. Non combustible, but will support combustion of other materials. Decomposes on heating emitting toxic fumes including those of chlorine, oxides of carbon and oxides of nitrogen.

### Special protective equipment and precautions for fire-fighters:

Non-combustible material. Keep containers cool with water spray. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

## 6. ACCIDENTAL RELEASE MEASURES

### Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. Evacuate personnel from downwind areas. Shut off all possible sources of ignition. Avoid breathing in vapours or dust. Work up wind or increase ventilation. Wear protective equipment to prevent skin and eye contact and inhalation of vapours/dusts. For large spills notify the Emergency Services.

### Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. DO NOT return spilled material to original container for re-use. Air-supplied masks are recommended to avoid inhalation of toxic material. If appropriate: DO NOT add small amounts of water to trichloroisocyanuric acid. Collect and transfer to large volume of water - do NOT use a metal container.

## 7. HANDLING AND STORAGE

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

### Precautions for safe handling:

Keep out of reach of children. Avoid skin and eye contact and breathing in dust. Avoid handling which leads to dust formation.

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## Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place. Store away from sources of heat or ignition. Store away from foodstuffs. Keep away from children and animals. Store away from incompatible materials described in Section 10. Keep dry - reacts with water, may lead to drum rupture. Calcium hypochlorite (dry or hydrated) and its mixtures are incompatible with, and must be stored away from, dichloroisocyanuric acid, ammonium nitrate, trichloroisocyanuric acid, or any chloroisocyanurate, strong acids, aluminium, iron, lead, magnesium, and zinc. Ensure pallets are clean and free of oil. Keep containers closed when not in use - check regularly for spills.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters:** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for decomposition product(s):

Chlorine: Peak Limitation = 3 mg/m<sup>3</sup> (1 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

Peak Limitation - a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

### Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

### Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| <b>Physical state:</b>                  | Crystalline Powder , Granular , Tablets |
| <b>Colour:</b>                          | White                                   |
| <b>Odour:</b>                           | Chlorine                                |
| <b>Odour Threshold:</b>                 | Not available                           |
| <b>Molecular Formula:</b>               | C3Cl3N3O3                               |
| <b>Solubility:</b>                      | Sparingly soluble in water.             |
| <b>Specific Gravity:</b>                | 2.07 @20°C                              |
| <b>Relative Vapour Density (air=1):</b> | Not available                           |
| <b>Vapour Pressure (20 °C):</b>         | Not available                           |
| <b>Flash Point (°C):</b>                | Not applicable                          |
| <b>Solubility in water (g/L):</b>       | 12 @25°C                                |
| <b>Melting Point/Range (°C):</b>        | Not available                           |
| <b>Boiling Point/Range (°C):</b>        | Not available                           |
| <b>Decomposition Point (°C):</b>        | 225                                     |
| <b>pH:</b>                              | 2.8 (1% aqueous solution)               |
| <b>Viscosity:</b>                       | Not applicable                          |
| <b>Partition Coefficient:</b>           | Not available                           |

## 10. STABILITY AND REACTIVITY

|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity:</b>                         | Contact with acids liberates toxic gas.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Chemical stability:</b>                 | Stable if stored and handled under recommended conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Possibility of hazardous reactions:</b> | Oxidizing agent. Supports combustion of other materials and increases intensity of a fire. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. On contact with nitrogen compounds, fumes of nitrogen trichloride can be formed, which are very explosive.                                                                                                                                                                                    |
| <b>Conditions to avoid:</b>                | Avoid contact with combustible chemicals. Avoid contact with other chemicals. Avoid contact with foodstuffs. Avoid exposure to heat, sources of ignition, and open flame. Avoid exposure to moisture.                                                                                                                                                                                                                                                                                              |
| <b>Incompatible materials:</b>             | Incompatible with combustible materials , acids , water , alkalis , calcium hypochlorite (dry or hydrated) , nitrogen compounds , sodium hypochlorite , reducing agents , ammonium compounds and oils and greases . Incompatible with heat and hot surfaces.<br>Calcium hypochlorite (dry or hydrated) and its mixtures are incompatible with dichloroisocyanuric acid, ammonium nitrate, trichloroisocyanuric acid, or any chloroisocyanurate, acids, aluminium, iron, lead, magnesium, and zinc. |
| <b>Hazardous decomposition products:</b>   | Chlorine. Oxides of carbon. Oxides of nitrogen.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

|                     |                                                                           |
|---------------------|---------------------------------------------------------------------------|
| <b>Ingestion:</b>   | Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain. |
| <b>Eye contact:</b> | An eye irritant. May cause watering of eyes and blurred vision.           |

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**Skin contact:** Contact with skin may result in irritation.  
**Inhalation:** Material is irritant to the mucous membranes of the respiratory tract (airways).

**Acute toxicity:**  
Oral LD50 (rat): 406 mg/kg.

**Skin corrosion/irritation:** Moderate irritant (rabbit). Std Draize test. 500 mg/24 hr  
**Serious eye damage/irritation:** Severe irritant (rabbit). (Standard Draize test) 500mg/24H  
**Chronic effects:** No information available for the product.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Avoid contaminating waterways.  
**Aquatic toxicity:** Very toxic to aquatic organisms. May cause long lasting harmful effects to aquatic life.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods:**  
Refer to Waste Management Authority. Dispose of contents and container in accordance with local, regional, national, international regulations.

## 14. TRANSPORT INFORMATION

### Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



**UN No:** 2468  
**Transport Hazard Class:** 5.1 Oxidizing Agent  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** TRICHLOROISOCYANURIC ACID, DRY  
**Hazchem or Emergency Action Code:** 1W

### Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

**UN No:** 2468  
**Transport Hazard Class:** 5.1 Oxidizing Agent  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** TRICHLOROISOCYANURIC ACID, DRY

**IMDG EMS Fire:** F-A  
**IMDG EMS Spill:** S-Q

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## **Air Transport**

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

**UN No:** 2468  
**Transport Hazard Class:** 5.1 Oxidizing Agent  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** TRICHLOROISOCYANURIC ACID, DRY

## **15. REGULATORY INFORMATION**

### **Classification:**

This material is hazardous according to Safe Work Australia; HAZARDOUS CHEMICAL.

### **Classification of the chemical:**

Oxidising solids - Category 2  
Acute Oral Toxicity - Category 4  
Eye Irritation - Category 2A  
Specific target organ toxicity (single exposure) - Category 3

The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations:

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Chronic Aquatic Toxicity - Category 1

### **Hazard Statement(s):**

H272 May intensify fire; oxidizer.  
H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

**Poisons Schedule (SUSMP):** S6 Poison.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

## **16. OTHER INFORMATION**

'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2015.

This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

### **Reason(s) for Issue:**

5 Yearly Revised Primary SDS

# Safety Data Sheet



This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.