

# SAFETY DATA SHEET



Revision date: 03-Sep-2020

Revision Number 6

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** TRICHLOROISOCYANURIC ACID

**Product Code(s)** 000031021401

### Other means of identification

**UN number** 2468

**CAS No.** 87-90-1

**Synonyms** 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

**Recommended use** Bleaching, sanitising, pool chemical.

**Uses advised against** No information available.

### Details of the supplier of the safety data sheet

#### Supplier

Ixom Operations Pty Ltd (Incorporated in Australia)  
NZBN: 9429041465226 Address: 166 Totara Street  
Mt Maunganui South  
New Zealand

Telephone Number: +64 9 368 2700

Facimile: +64 9 368 2710

### For further information, please contact

**Contact Point** Product Safety Department

### Emergency telephone number

**Emergency Telephone** 0 800 734 607 (ALL HOURS)

## 2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Notice 2017 and the Hazardous Substances (Classification) Notice 2017.

### GHS Classification

#### **SIGNAL WORD**

Danger

Subclass 5.1.1 Category B (Oxidising Substances that are solids or liquids: medium hazard) - Oxidising Substances.

Subclass 6.1 Category D - Substances which are acutely toxic.  
Subclass 6.3 Category A - Substances that are irritating to the skin.  
Subclass 8.3 Category A - Substances that are corrosive to ocular tissue.  
Subclass 9.1 Category A - Substances that are very ecotoxic in the aquatic environment.  
Subclass 9.2 Category D - Substances that are slightly harmful in the soil environment.  
Subclass 9.3 Category C - Substances that are harmful to terrestrial vertebrates.

Approval Number: HSR001359

### Label elements



### **Hazard statements**

H272 - May intensify fire; oxidizer  
H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H410 - Very toxic to aquatic life with long lasting effects  
H423 - Harmful to the soil environment  
H433 - Harmful to terrestrial vertebrates

### **Precautionary Statements - Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep away from clothing and other combustible materials  
Take any precaution to avoid mixing with combustibles  
Avoid breathing dust / fume / gas / mist / vapours / spray  
Wash hands thoroughly after handling  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Wear protective gloves / protective clothing / eye protection / face protection  
Use personal protective equipment as required  
Avoid release to the environment

### **Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
Specific treatment (see First aid on this SDS)  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention  
IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Wash contaminated clothing before reuse  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth  
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet for extinction.  
Collect spillage

### **Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

### **Precautionary Statements - Disposal**

In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Notice 2017. This may also include any method of disposal that must be avoided.

**Other hazards which do not result in classification**

Contact with acids liberates toxic gas

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS No.	Weight-%
Trichloroisocyanuric acid	87-90-1	>90.0
Water	7732-18-5	<0.5

**4. FIRST AID MEASURES****Description of first aid measures**

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
<b>Emergency telephone number</b>	Poisons Information Center, New Zealand: 0800 764 766 Poisons Information Center, Australia: 13 11 26
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water. Call a physician if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Irritation.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically. Can cause corneal burns.

**5. FIRE FIGHTING MEASURES****Suitable Extinguishing Media**

**Suitable Extinguishing Media** Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Unsuitable extinguishing media** No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Oxidizer. Promotes the combustion (oxidizer). Can cause fire and explosion when in contact with flammable substances. Any material contaminated with the product (e.g. clothes) ignites easily and burns vigorously - increased fire hazard. Containers may explode when heated.

**Hazardous combustion products** Carbon oxides. Nitrogen oxides. Chlorine gas.

**Special protective actions for fire-fighters**

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**Hazchem code** 1W

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin and eyes. Avoid generation of dust. Evacuate personnel to safe areas. Wash thoroughly after handling.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Never return spill or leaks to original containers for re-use.

**Precautions to prevent secondary hazards**

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Avoid breathing dust / fume / gas / mist / vapours / spray. Avoid contact with skin and eyes. Avoid generation of dust.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store away from foodstuffs. 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, zinc. Keep container closed when not in use.

**Incompatible materials** Combustible material. Acids. Water. Alkalis. Calcium hypochlorite. Nitrogen containing compounds. Sodium hypochlorite. Reducing agents. Ammonium compounds. Oils. Grease.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Limits**

No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for particulate(s):

Particulates not otherwise classified: 8hr WES-TWA 10 mg/m<sup>3</sup> (inhalable dust) or 3 mg/m<sup>3</sup> (respirable dust)

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

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****Engineering controls**

Apply technical measures to comply with the occupational exposure limits.

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**

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.

**Eye/face protection**

Goggles.

**Hand protection**

Impervious gloves.

**Skin and body protection**

Boots. Wear suitable protective clothing. Overalls.

**Respiratory protection**

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.

**Environmental exposure controls**

No information available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	Solid
<b>Appearance</b>	Crystalline Powder or Granules or Tablets
<b>Color</b>	White
<b>Odor</b>	Chlorine
<b>Odor threshold</b>	No information available.

<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>
<b>pH</b>	3-3.5 (1% solution @25°C)	None known
<b>Melting point / freezing point</b>	249-251°C	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Flash point</b>	225°C	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	No data available	
<b>Lower flammability or explosive limits</b>	No data available	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	ca. 1.05 @20°C	None known
<b>Water solubility</b>	Sparingly soluble	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Decomposition temperature</b>	225°C	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

**Other information****10. STABILITY AND REACTIVITY****Reactivity**

**Reactivity** Contact with acids liberates toxic gas.

**Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**Hazardous polymerization** Hazardous polymerization does not occur.

**Possibility of hazardous reactions** On contact with nitrogen compounds, fumes of nitrogen trichloride can be formed, which are very explosive. Contact with acids liberates toxic gas. Heating causes rise in pressure with risk of bursting.

**Conditions to avoid**

**Conditions to avoid** Dust formation. Exposure to water. Moisture. Heat.

**Incompatible materials**

**Incompatible materials** Combustible material. Acids. Water. Alkalis. Calcium hypochlorite. Nitrogen containing compounds. Sodium hypochlorite. Reducing agents. Ammonium compounds. Oils. Grease.

**Hazardous decomposition products**

**Hazardous decomposition products** Carbon oxides. Nitrogen oxides. Chlorine gas.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Information on likely routes of exposure**

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

**Inhalation** Irritating to respiratory system.

**Eye contact** Causes serious eye damage.

**Skin contact** Causes skin irritation.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Symptoms** Irritation.

**Acute toxicity****Numerical measures of toxicity**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Trichloroisocyanuric acid	= 406 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	0.09 - 0.29 mg/L ( Rat ) 4 h
Water	> 90 mL/kg ( Rat )	-	-

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Irritating to skin.

**Serious eye damage/eye irritation** Irritating to eyes.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** May cause respiratory irritation.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity** Keep out of waterways. Very toxic to aquatic life with long lasting effects.

**Terrestrial ecotoxicity** There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Trichloroisocyanuric acid	-	LC50: 0.13 - 0.5mg/L (96h, Lepomis macrochirus) LC50: 0.06 - 0.11mg/L (96h, Oncorhynchus mykiss)	EC50: =0.21mg/L (48h, Daphnia magna) EC50: 0.16 - 0.18mg/L (48h, Daphnia magna)

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

### Other adverse effects

**Other adverse effects** No information available.

### Endocrine Disruptor Information

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Trichloroisocyanuric acid	Group III Chemical	-	-

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste from residues/unused products** Dispose of product in packaging in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act. Treat the substance using a method that changes the characteristics or composition of the substance so that the substance is no longer a hazardous substance; or export the substance from New Zealand as waste. Class 2, 3 and 4 substances - may not be disposed of into or onto a landfill or sewage facility. They may only be burnt in certain situations. Class 2.1.1, 3.1 and 4.1.1 substances may only be discharged into the environment as waste if the substance will not at any time come into contact with class 1 or class 5 substances; and there will be no ignition source in the vicinity of the disposal site at any time and if the substance were to ignite, no person, or place where a person may legally be, would be exposed to an unsafe level of heat radiation.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.



**14. TRANSPORT INFORMATION**

**ROAD AND RAIL TRANSPORT** Classified as a Dangerous Good according to NZS 5433:2012 Transport of Dangerous Goods on Land.

UN number 2468  
 Proper shipping name TRICHLOROISOCYANURIC ACID, DRY  
 Hazard class 5.1  
 Packing group II  
 Hazchem code 1W

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

UN number 2468  
 UN proper shipping name TRICHLOROISOCYANURIC ACID, DRY  
 Transport hazard class(es) 5.1  
 Packing group II

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

UN number 2468  
 UN proper shipping name TRICHLOROISOCYANURIC ACID, DRY  
 Transport hazard class(es) 5.1  
 Packing group II  
 IMDG EMS Fire F-A  
 IMDG EMS Spill S-Q  
 Marine pollutant Yes

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****New Zealand**

**National regulations** See section 8 for national exposure control parameters

Chemical name	New Zealand HSNO Chemical Classification
Trichloroisocyanuric acid - 87-90-1	5.1.1B,6.1D (All),6.1D (O),6.3A,8.3A,9.1A (All),9.1A (C),9.1A (F),9.2D,9.3B

**International Inventories**

**NZIoC** This material is listed on the New Zealand Inventory of Chemicals.  
**TSCA** Contact supplier for inventory compliance status.  
**DSL/NDSL** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AICS** This material is listed on the Australian Inventory of Chemical Substances.

**Legend:**

**NZIoC** - New Zealand Inventory of Chemicals

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## 16. OTHER INFORMATION

Supplier Safety Data Sheet 02/ 2019

### Prepared By

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

### Issuing Date:

03-Sep-2020

### Reason(s) For Issue:

5 Yearly Revised Primary SDS

### Revision Note:

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australian Industrial Chemicals Introduction Scheme (AICIS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set

RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Disclaimer**

**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.**

**End of Safety Data Sheet**