

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**Product Name:** BLUEWATER STABILISED POOL CHLORINE TABLETS**Other name(s):** TICA, Trichloroisocyanuric acid tablets, Trichlor, Trichloro-s-triazine trione, Trichloro-1,3,5-triazine trione**Recommended Use:** Bleaching, sanitising, pool chemical.**Supplier:** Chempro Group Limited – T/A: Bluewater Poolcare
Street Address: 28 Bowden Road
MT Wellington
Auckland
New Zealand**Telephone Number:** +64 9 914 8599**Facsimile:** +64 9 309 9264**Emergency Telephone:** N Z 0800 243 622 or International +64 3 353 0199 (ALL HOURS)**2. HAZARDS IDENTIFICATION**

Classified as a Dangerous Good according to NZS 5433:2007 Transport of Dangerous Goods on Land.

Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001.

Subclasses: 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 B - Substances that are ecotoxic to terrestrial vertebrates.**3. COMPOSITION/INFORMATION ON INGREDIENTS****Product Description:** 90% available chlorine.

Components	CAS Number	Proportion	Risk Phrases
Trichloroisocyanuric acid	87-90-1	>99%	R8, R22, R31, R36/37, R50/53

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (Phone eg. Australia 131 126; New Zealand 0800 764 766) or a doctor

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 discolouration 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 contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.
- Eye Contact:** If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the 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. Seek immediate medical assistance.
- Notes to physician:** Treat symptomatically based on individual reactions of patient and judgement of doctor. Probable mucosal damage may contraindicate the use of gastric lavage. Delayed effects from exposure to chlorine (decomposition product) can include shortness of breath, violent headaches, pulmonary oedema and pneumonia. Can cause corneal burns.
- Aggravated Medical:** Target Organs: Kidneys, Liver, Respiratory System, Eyes and Skin. May cause kidney and liver damage. Long term exposure through skin contact may result in dermatitis. Long term exposure through eye contact may result in eye damage or blindness. Long term exposure through inhalation or ingestion may result in ulcers.

5. FIRE FIGHTING MEASURES

Hazards from combustion products:

Oxidizing substance. Non combustible, but will support combustion of other materials.

Precautions for fire fighters and special protective equipment:

Powerful oxidising agent. Not combustible, but will support the combustion of other material. Contact with other material may cause fire. Incompatible materials include acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds, strong reducing agents, strong bases, moist air, water, combustible materials, strong oxidising agents, and sources of ignition. When involved in a fire, this product may generate hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide, carbon monoxide, cyanogen chloride, nitrogen trichloride, chlorine and phosgene. Decomposes violently upon heating liberating oxygen. If heated by outside source to temperatures above 240°C, this product will undergo self-sustaining decomposition with the evolution of heat and dense noxious gases, but no visible flame.

Suitable Extinguishing Media:

Only large quantities of water should be used as an extinguishing agent. Do NOT use dry chemicals, carbon dioxide or halogenated extinguishing agents. If excess water is not available, DO NOT attempt to extinguish the fire; use available water to prevent the spread of fire to adjacent property. A fire in the vicinity of trichloroisocyanuric acid should be extinguished in the most practical manner but avoid contaminating the material with the fire-fighting agent, including water.

Hazchem Code: 1W

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures:

Personnel involved in the clean up should wear full protective clothing. Prevent skin and eye contamination and inhalation of vapours; air supplied mask is recommended for large spills to avoid inhalation of toxic chlorine gas which is liberated when material is exposed to water. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment.

Methods and materials for containment and clean up:

Contain and sweep/shovel up spills. DO NOT add water to spilled material. DO NOT use floor sweeping compounds to clean up spills. Avoid contact with other material. DO NOT return spilled material to original container. Collect and transfer to large volume of water – DO NOT use a metal container. Do NOT attempt to reseal contaminated drums. Do NOT transport wet/damp material. Damp material should be neutralised to a non-oxidising state. Do NOT use combustible materials such as paper towels to clean up spill. Keep combustibles away from spilled material. To Neutralise: Add sodium sulphite (3.5Kg/Kg of product). If no active chlorine remains, add soda ash (2.0Kg/Kg pf

product) to effect complete neutralisation. Where a spill has occurred in a confined space or an inadequately ventilated enclosure and the material is damp and evolving chlorine, the rate of chlorine evolution can be reduced by covering the thinly spread solid with soda ash.

7. HANDLING AND STORAGE

Precautions for safe handling:

This product is highly reactive. Handle with extreme care. Do NOT drop, roll or skid containers. Avoid contaminating with any other materials, including other chlorine containing pool chemicals. Scoops, containers and other implements must be clean, dry and reserved for this material only. Do NOT allow water to get inside container. If liner is present, tie after each use. Never add water to this product. Always add product to large quantities of water. Do NOT add the product to any dispensing device containing residuals of other products. 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 skin, eyes and clothing. Do NOT inhale product dust/vapour. Use only in a chemical fume hood.

Conditions for safe 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 acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds, strong reducing agents, strong bases, moist air, water, combustible materials, strong oxidising agents, and sources of ignition. Protect from heat, fire, high humidity, sparks, direct sunlight and moisture. Product is hygroscopic (absorbs moisture from the air). Store under inert atmosphere. Store away from foodstuffs. Ensure pallets are clean and free from oil. Do NOT store in corrosives area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

No value assigned for this specific material by the New Zealand Occupational Safety and Health Service (OSH). However, Exposure Standard(s) for decomposition product(s):

Chlorine: WES-TWA 0.5 ppm, 1.5 mg/m³; WES-STEL 1 ppm, 2.9 mg/m³

As published by the New Zealand Occupational Safety and Health Service (OSH).

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.

WES - STEL (Workplace Exposure Standard - Short Term Exposure Limits) - The 15 minute average exposure standard.

Applies to any 15 minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and eight-hour, time-weighted average exposures should be determined.

These 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 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.

Engineering Control Measures:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

Personal Protective Equipment:

Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If dust exists, wear 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

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

10. STABILITY AND REACTIVITY

Chemical stability: Product is stable under directed conditions of use, storage and temperature. Strong Oxidising agent. Hygroscopic (absorbs moisture from the air).

Conditions to avoid: Avoid excessive heat, sparks, flame, direct sunlight, static charges, generating dust, moisture, and high temperatures.

Incompatible materials:

Incompatible materials include acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds, strong reducing agents, strong bases, moist air, water, combustible materials, strong oxidising agents, and sources of ignition.

Hazardous decomposition products:

When involved in a fire, this product may generate hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide, carbon monoxide, cyanogen chloride, nitrogen trichloride, chlorine and phosgene. Decomposes violently upon heating liberating oxygen. If heated by outside source to temperatures above 240°C, this product will undergo self-sustaining decomposition with the evolution of heat and dense noxious gases, but no visible flame.

Hazardous reactions:

Hazardous polymerization has not been reported. Mixture with combustible materials (eg, wood, straw, cotton, paper, sugar or oil) are readily ignited and may burn fiercely. On contact with alkaline materials or with nitrogen compounds, nitrogen trichloride fumes can form, which are very explosive. Wet material may also generate nitrogen trichloride. Reaction with water may lead to drum rupture. Reacts with water and acids to form toxic chlorine gas. This product may form explosive mixtures with calcium hypochlorite. Decomposes violently upon heating liberating oxygen.

11. TOXICOLOGICAL INFORMATION

Toxicity Data: Oral LD50 Rat : 406mg/Kg Oral LD50 Rat : 809mg/Kg Dermal LD50 Rabbit : 7600mg/Kg Draize test, Rabbit, eye : 500mg Severe; Draize test, rabbit, skin: 500mg/24hr Moderate Primary Skin Irritation : Slightly corrosive (rabbit/24hr) Primary Eye Irritation : Corrosive (rabbit/24hr) DOT Skin Corrosion : Not corrosive (rabbit/24hr) Metabolic Studies (mice) : No tendency to accumulate in tissue, organs or glands. Carcinogenicity Studies : Not tumorigenic or carcinogenic under the conditions expected in sanitising swimming pools. Mutagenicity

Studies : Non-mutagenic. Teratogenicity tests with the aqueous sodium salt (sodium cyanurate) on rats and rabbits were negative.

Health Effects

Acute

Ingestion:

Harmful if swallowed. Ingestion may cause immediate pain and severe burns of the mucous membranes. There may be discolouration of the tissues. Swallowing and speech may be difficult at first and then almost impossible. The effects on the esophagus and gastrointestinal tract may range from irritation to severe corrosion. Edema of the epiglottis and shock may occur.

Eye contact:

Irritating to eyes. Direct eye contact may result in severe irritation, pain and burns, possibly severe, and permanent damage including blindness. The degree of injury depends on the concentration and duration of the contact. Repeated or prolonged contact may result in conjunctivitis.

Skin contact:

Direct skin contact with wet material or moist skin may cause severe irritation, pain and possibly burns. This material is not considered to be a skin sensitizer, based on studies with guinea pigs. Repeated or prolonged contact may result in dermatitis.

Inhalation:

Irritating to the respiratory system. This material in the form as sold is not expected to produce respiratory effects. If ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. May cause severe irritation of the respiratory tract with coughing, choking, pain, and possibly burns of the mucous membranes. In some cases, pulmonary edema may develop, either immediately or more often within a period of 5-72 hrs. The symptoms may include tightness in the chest, dyspnea, frothy sputum, cyanosis and dizziness. Physical findings may include moist rales, low blood pressure and high pulse pressure.

Severe cases may be fatal. Repeated or prolonged exposure may cause inflammatory and ulcerative changes in the upper respiratory tract.

Long Term Effects:

No information available for the product.

Toxicological Data:

Oral LD50 (rat): 1355-1400 mg/kg. (1)

12. ECOLOGICAL INFORMATION

Ecotoxicity

Avoid contaminating waterways.

Aquatic toxicity:

Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Add sodium dichloroisocyanurate into dilute solution of sodium hydroxide or soda ash with stirring gradually and neutralize that solution with reduction agents such as sodium sulfite and sodium thiosulfate. Adjust pH with sulfuric acid or hydrochloric acid to make neutral solution and dispose. (1)

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as a Dangerous Good according to NZS 5433:1999 Transport of Dangerous Goods on Land.

UN No: 2468
Class-primary 5.1 Oxidizing Agent
Packing Group: II
Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY
Hazchem Code: 2WE

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
Class-primary 5.1 Oxidizing Agent
Packing Group: II
Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY

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
Class-primary 5.1 Oxidizing Agent
Packing Group: II
Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY

15. REGULATORY INFORMATION

Classification: Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001.

Subclasses: 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 6.4 Category A - Substances that are irritating to the eye.
Subclass 9.1 Category A - Substances that are very ecotoxic in the aquatic environment.
Subclass 9.2 Category A - Substances that are very ecotoxic in the soil environment.
Subclass 9.3 Category C - Substances that are harmful to terrestrial vertebrates.

Approval: HSR006483

16. OTHER INFORMATION

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Chempro Logistics Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Chempro Logistics Limited's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.