

MATERIAL SAFETY DATA SHEET

MSDS No: 343XX Previous Edition: MAY 2002 Date Issued: APRIL 2004 Page: 1 of 4

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aqua~Health Giant Tablets

Manufacturer's Product Code: 34305
34310
34350

Other Names: TICA

Container Size: 5 pack
10 pack
50 pack

Hazard Statement: Classified as a hazardous substance according to the criteria of the National Occupational Health and Safety Commission.

Use: Control of algae and bacteria in swimming pools. Should not be used in spas.

Appearance: White 200g tablets with a slight smell of chlorine.

Company: Waterco Ltd **ACN Number:** 002 070 733

Company Address: 390 Marion Street **Phone Number:** (02) 9795.5500
Bankstown NSW 2200 **Emergency Number:** Not available
 Fax Number: (02) 9796.7848

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity [†]	Synonyms	CAS Number	Amount
Trichloroisocyanuric acid (90% available chlorine)	TICA, C ₃ Cl ₃ N ₃ O ₃	87-90-1	98-99%
Sodium Tetraborate	Borax	1303-96-4	1-2%

† Where they are present in this product, any other ingredients of this material are not hazardous, as defined by either inclusion in the *List of Designated Hazardous Substances* or classified in accordance with the *Approved Criteria for Defining a Hazardous Substance*, and published by the National Occupational Health and Safety Commission/AGPS, 1999.

3. HEALTH HAZARD INFORMATION

Routes of Exposure: The primary hazard of this product is inhalation of chlorine gas (released from the tablets).

Acute Effects:

Swallowed: Swallowing this product may be harmful to health.

Skin: The active ingredient of the tablet is irritating to skin, causing symptoms from itching to redness, with chemical burns and blisters to moderate exposures and the possibility of corrosion (scarring).

Eye: The active ingredient of the tablet is severely irritating to the eye on contact, with symptoms of discomfort, tears and blurred vision. Corrosion to the cornea and other eye surfaces is also possible.

Inhaled: Airborne dusts may release chlorine gas, which is irritating to the upper airways and lungs producing discomfort, coughing and sneezing.

Chronic Effects: None known. Limited information is available to suggest that long term low level exposure to chlorine gas may be associated with respiratory problems.

Medical Conditions that may be Aggravated by Exposure: Pre-existing respiratory conditions may be aggravated by inhalation of this product. Delayed effects from exposure to chlorine gas can include shortness of breath, pulmonary oedema and chemical pneumonitis.

4. FIRST AID MEASURES

First Aid: Take a copy of this MSDS to medical advisers if signs or symptoms of overexposure occur and medical attention is required.

Swallowed: Immediately rinse mouth out with water. Give two glasses of water and do not induce vomiting. Never give anything by mouth to an unconsciousness person. **Seek advice immediately from a medical practitioner or Poisons Information Centre.**

Skin: Thoroughly wash exposed skin with plenty of soap and water. **Seek medical advice if skin irritation occurs.**

Eye: If contact occurs, or if eye irritation arises, hold the eyelids open and flush the eyes with fresh lukewarm water (or, if available, other eye cleansing solutions) for at least 15 minutes. **Seek medical advice immediately for all eye contact.**

Inhaled: Remove affected individual from exposure to fresh air. Keep individual warm and comfortable. If breathing is laboured and the individual has blue lips (cyanotic) ensure airways are clear and arrange oxygen from a qualified person. If breathing has stopped supply artificial respiration at once. If cardiac arrest occurs, apply cardiopulmonary resuscitation.
Seek medical advice if respiratory symptoms occur.

First Aid Facilities: If practicable, an eyewash station should be available.

Advice to Doctor: No specific treatment recommended. Treat symptomatically for exposure to chlorine gas). Delayed effects include headaches, shortness of breath, pulmonary oedema and pneumonia.

5. FIRE FIGHTING MEASURES

Lowest Flash Point:	Non flammable	Lower Flammability Limit:	Non flammable
Autoignition Temperature:	NA	Upper Flammability Limit:	Non flammable
Hazchem Code:	2WE		
Extinguishers:	No special requirement. Use an extinguisher commensurate with the fire risks of other materials in the fire.		
Firefighting Precautions:	Fire fighters must wear full protection and self-contained breathing apparatus.		
Combustion Products:	Carbon dioxide, Carbon monoxide, hydrogen chloride gas, other chlorine containing vapours,		

6. ACCIDENTAL RELEASE MEASURES

Clean up spills promptly. Keep spilt product out of drains, sewers and waterways. Spills should be contained, and the possibility of collection for re-uses evaluated. If this is not possible, ventilate the area of spill, wear personal protective equipment as specified below, and sweep the tablets or collect them and place into a leakproof container for disposal. Avoid sawdust as an absorbent. Sodium sulphite (3.5 kg for every kg of product spilled) or Soda ash (2.0 kg for every kg product spilled) can be used to neutralise spills, if necessary. Wash down the area of spill with plenty of water to remove any remaining residues.

7. HANDLING AND STORAGE

Handling: Keep out of the reach of children. Do not eat, drink or smoke while handling the product. Do not swallow. Avoid contact with the eyes. Avoid skin contact. Avoid inhaling dusts or chlorine gas. Avoid contact of the material with water or moisture, except in its normal use.

See below for specific advice on controls and precautions.

Flammability: Not combustible or flammable, but produces toxic and corrosive combustion products if the product is involved in a fire.

Storage: The product is a dangerous good (Class 5.1 Oxidising Agent) and should be stored in accordance with the Australian Dangerous Goods Code and Dangerous goods legislation. The product is a scheduled poison (S5) and should be stored and used in accordance with the Standard for the Uniform Scheduling of Drugs and Poisons, and Poisons legislation. Minimal conditions include storage in a cool, dry, ventilated store away from moisture, sunlight, moisture and incompatible substances. Containers should be kept upright, closed and airtight when not in use.

8. EXPOSURE CONTROLS/PERSONNEL PROTECTION

Exposure Standards: No ingredients in this product have exposure standards, as outlined in the standard *Exposure Standards for Atmospheric Contaminants in the Occupational Environment* third edition, published by the National Occupational Health and Safety Commission/AGPS, 1995. However, an exposure standard exists for the decomposition product:

Ingredient	TWA		STEL		Other notations
	ppm	mg/m ³	ppm	mg/m ³	
Chlorine	1	3	-	-	Peak limitation

Notes: TWA Time Weighted Average over an eight hour shift.
STEL Short Term Exposure Limit. Exposure should not be of more than 15 minutes duration, not more than four times a day, and each exposure at least one hour apart.

The odour threshold for chlorine is about 0.5 ppm.

Engineering Controls: Exposures can be reduced by process modification, use of general ventilation (either natural or mechanical) or other methods are usually sufficient to control dusts arising from the use of this material. Keep containers closed when not in use.

Personal Protective Equipment: All personal protective equipment should be selected, used, maintained and decontaminated in accordance with manufacturer instructions and applicable standards.

Clothing: Overalls and boots should be worn as a general requirement.

Skin Protection: Where a skin exposure is likely, skin protection is required, including gloves and apron. Chemically resistant gloves made of rubber, nitrile, PVC or neoprene should be satisfactory. Any such gloves should comply with AS 2161.

Eye Protection: Eye protection should be used where splashing of solutions or large amounts of dusts may be generated. Faceshield, chemical goggles or safety glasses with side shields are suitable. Such eye protection should comply with AS 1336/1337.

Respiratory protection: Respiratory protection is not required where the production of dusts or chlorine gas is significant. In such cases, a suitable respirator, such as an approved particulate mask should be used. The selection, use and maintenance of such respiratory protection should comply with AS 1517/1716.

Personal Hygiene: Always wash hands after using this product. Always wash hands before eating or drinking.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Range:	Decomposes	Solubility in Water:	12 g/L at 25°C
Melting Point:	225-235°C	pH:	2.7-3.5 (1% solution @ 25°C)
Specific Gravity:	NA	% Volatiles:	Not volatile
Vapour Pressure:	NA	Evaporation Rate:	NA
Vapour density: (compared with Air = 1)	NA		(compared with Ether = 1)

10. STABILITY AND REACTIVITY

Stability:	Stable. Trichloroisocyanuric acid forms isocyanuric acid when dissolved in water with the release of chlorine gas.
Reactivity:	Powerful oxidising agent - will react with all organic materials. Readily ignites combustible materials. Reacts with water or acids producing toxic chlorine gas. Explosive gases may be released with ammonia and alkaline materials. See sections on Conditions to avoid and Incompatibilities.
Conditions to avoid:	Heat, moisture, incompatible chemicals.
Incompatibilities:	Acids, alkalis, oxidising agents, organic materials, ammonia.
Hazardous Polymerisation:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Oral LD ₅₀ (rat)	406 mg/kg
Dermal LD ₅₀ (rabbit)	2000 mg/kgg
Eye irritation (rabbit)	Severe irritant
Skin irritation (rabbit)	Moderate irritant

Trichloroisocyanuric acid is not considered a skin sensitiser (in the guinea pig). Trichloroisocyanuric acid was not toxic in a long term repeated dose study (30 days) in rats dosed with 2 ppm in drinking water.

Isocyanuric acid was not toxic in a long term repeated dose study (two years) in rats dosed with 5% in the diet.

Metabolic studies show that Isocyanuric acid does not accumulate in the body. When tested for genotoxicity, Isocyanuric acid was negative.

12. ECOLOGICAL INFORMATION

This product is considered an environmental hazard. Avoid contaminating waterways.

13. DISPOSAL

Do not discharge this product to natural waterways, stormwater channels or sewers. This product is not a hazardous waste and it can, along with its containers, be disposed to landfill in accordance with local regulations.

14. TRANSPORTATION INFORMATION

The product is generically classified as a dangerous good (Class 5.1 Oxidising Agent). Transport in accordance with the Australian Dangerous Goods Code and Dangerous goods legislation.

15. REGULATORY INFORMATION

Dangerous Goods Legislation		Poisons Legislation	
Correct Technical Name:	NA	Poisons Schedule:	S6
UN Number:	2468	Hazardous Substances	
Dangerous Goods Class:	5.1 Oxidising agent	Classification:	Hazardous
Subsidiary Risk:	NA	Risk Phrases:	22
Packing Group:	II	Safety Phrases:	

16. OTHER INFORMATION

Worker Training:	As a minimum, all workers using this product should be shown a copy of this MSDS before first use.
Contact Point:	Mr Scott Mort
Title:	Despatch Supervisor
Telephone Number:	(02) 9795.5500

This material safety data sheet (MSDS):

- 1 Is produced by Waterco Ltd for use in Australia, and is based on information supplied to Waterco Ltd by our suppliers.
- 2 Summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace.
- 3 Has been formatted to an MSDS format accepted by the National Occupational Health and Safety Commission for use in Australia.
- 4 Has been produced following the principles and recommendations outlined in the *Code of Practice for Completion of a Material Safety Data Sheet*, published by the National Occupational Health and Safety Commission/AGPS, Canberra, 1994.

Each user must review this MSDS in the context of how the product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Waterco Ltd. If this MSDS is a copy, or more than five years old, contact Waterco for a new one.