

Section 1: Identification of the Substance/Mixture and of Supplier

Product name:	Crystal Water Refresh
Recommended use:	Swimming Pool and Spa Pool Sanitiser, Biocide, Fungicide and
Supplier:	Algaecide. Space Industries Limited
Street Address:	160 Plunket Ave, Wiri, Auckland New Zealand
Telephone Number:	+ 64 9 262 3902
Facsimile:	+ 64 9 262 3948
E-mail:	orders@spaceindustries.co.nz
Website:	www.spaceindustries.co.nz
Emergency Telephone	0800 764 766 (all hours)
Date of preparation:	February 2022

Section 2: Hazards Identification



ERMA Approval Code:	HSR005105
HSNO Classification:	6.1D (All), 6.1D(oral), 6.4A, 9.1A(algae), 9.1A(All), 9.1A (fish), 9.1A (crustacean),9.3C

Section 3: Composition/information on ingredients

Product Description:	Swimming Pool and Spa Pool Sanitiser, Biocide, Fungicide and Algaecide. White granule, solid
Components	Sodium Dichloroisocyanurate – Dihydrate Dichlor
CAS Number	51580-86-0
Proportion	Max. 56%
Risk Phrases	R20, R21, R22, R31, R34, Xi; R36/37, R41, N; R50/53,

Section 4: First Aid Measures

Show this Safety Data Sheet to a Doctor
Short term exposure by all routes is considered to be harmful.

Inhalation:	May cause respiratory irritation. Remove victim to fresh air. If irregular or not breathing, give artificial respiration. Seek immediate medical attention.
Skin Contact:	Harmful if swallowed. Immediately flush with large quantities of water. Ensure all contaminated clothing is removed, including footwear (wash thoroughly). Get medical attention immediately.
Eye Contact:	Causes serious eye irritation. Check for and remove contact lenses. Immediately irrigate with copious quantities of water for at least 15 minutes holding eyelids apart. Retract eyelids to ensure complete wash of all eye and lid tissues. Urgently seek medical assistance.

Ingestion:	If victim is conscious and alert, allow to rinse mouth and then drink two cups of water. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs spontaneously, keep airway clear. Drink more water when vomiting stops. Contact a Doctor or the Poisons Information Centre (0800 764 766) for further advice immediately.
Notes to Doctor:	Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Corrosive. If swallowed - causes severe burning and corrosion to the mucous membranes and tissues of the mouth, throat and stomach. Corrosive to eyes – can cause irreversible damage. Can cause corneal burns. Skin contact will cause moderate irritation. Corrosive on contact with moist skin and will cause burns. Avoid inhalation – may be fatal if inhaled – mist vapour can produce respiratory irritation and may cause damage of the upper respiratory tract and lung tissues.
Medical conditions aggravated by exposure:	Asthma, skin, eye or respiratory and cardiovascular disease may be at increased risk from the irritant or allergic properties of the material..
For advice, contact the Poisons Information Centre 0800 764 766 or a doctor	

Section 5: Fire Fighting Measures

Specific Hazards:	Oxidizing, risk of dust explosion. Ambient fire may liberate hazardous vapours. Fire may cause evolution of: Hydrogen chloride gas, nitrous gases.
Suitable Extinguishing Media:	Flood with large quantities of water. DO NOT USE Dry chemicals, carbon dioxide or halogenated extinguishing agents.
Fire-fighting advice:	Fire fighters should wear full protective clothing and use self-contained breathing apparatus (SCBA) in positive pressure mode. Cool containers with water spray. Flooding large amounts of water maybe required before extinguishments can be accomplished.
Unusual fire and explosion hazards:	When heated to decomposition, may release poisonous and corrosive fumes of Nitrogen Trichloride, Chlorine, Nitrous Oxides, Cyanates, and Carbon Monoxide and Carbon Dioxide. Oxidising, risk of dust explosion.

Section 6: Accidental Release Measures

Procedures to be covered:	In all instances, isolate hazard area and keep unnecessary people away.
For small spills:	In well-ventilated areas, wear half or full-face respirator or a loose fitting powered air-purifying respirator equipped with chlorine cartridges. Chemical goggles should be worn when using a half face respirator. In addition, wear coveralls; chemical resistant gloves; chemical resistant footwear; and chemical resistant head gear for overhead exposure.
For clean up of large spills (or small spills in a confined area):	Wear full-face respirator with chlorine cartridges or a positive pressure supplied air respirator. Additionally, body protection should be impervious clothing, covering entire body to prevent personal contact with this material including chemical resistant footwear and chemical resistant gloves. CAUTION - protection concerns must also address the following: if this material becomes damp/wet or contaminated in a container the formation of nitrogen trichloride gas may occur and an explosive condition may exist.
Methods for cleaning up:	STOP LEAK IF WITHOUT RISK. Avoid raising dust. Hazardous concentrations in air may be found in local spill area and immediately downwind. If spill material is still dry, do

not put water directly on this product as a gas evolution may occur.
 If material is wet, contact the network for proper stabilization procedures – must be neutralized to a non-oxidizing state.
Air release: Vapors may be suppressed by the use of a water fog.
Water release: Prevent entry into sewers, water supplies and confined areas. This material is heavier than water. This material is soluble in water. Stop flow of material into water source as soon as possible. Begin monitoring for available chlorine and ph immediately.
Soil: Do not contaminate spill material with any organic materials, ammonia, ammonium salts or urea. Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.

Section 7: Handling and Storage

Handling: Never add water to this product, always add the product to large quantities of water. Ensure an eye bath is available and ready for use. Observe good personal hygiene practices and recommended procedures. Use clean and dry utensils. Wash hands thoroughly after handling. Ensure adequate ventilation. Do not eat, drink or smoke when using this product.

Storage: Store away from foodstuffs. Avoid eye and skin and clothing contact. Keep out of reach of children. Read label before use – keep properly labeled at all times. No smoking. Store in a cool, dry, well-ventilated area away from incompatible materials (see "materials to avoid"). Keep away from heat and direct sunlight. Do not store at temperatures above 60°C. Product has an indefinite shelf life if stored at room temperature. Check regularly for spills.

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits: The threshold limit value, TLV (US) 1.5 mg/m³ (IUCLID) (Anhydrous product)
 No value assigned for this specific material by the New Zealand Occupational Safety and Health Service (OSH).

Engineering Control Measures: Use in a well ventilated area –adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment: Wear full protective clothing to avoid splashes. As product can cause eye irritation, safety glasses or goggles must be worn. The use of rubber gloves is recommended. Wash contaminated clothing and other protective equipment before storage or re-use.

Section 9: Physical and Chemical Properties

Physical state: Granular powder
Colour: White
Odour: Slight Chlorine
Partition coefficient (n –octanol/water): No data given
Solubility(ies): 285 g/l at 25°C
Specific Gravity: Approx 0.96 at 20°C
Bulk Density: 900 – 1000 kg/m³ at 20°C
Vapour Pressure (20 °C): Not available
Decomposition Temp: Begins to lose 1 mole water at approximately 50°C; second mole water at 95°C; decomposes at 240-250°C (464-482°F)
Molecular weight: 255.98
pH: 6.1-7.0 at 25°C (1% aqueous solution)

Section 10: Stability and Reactivity

Stability:	Stable under normal conditions of storage, shipment and/or use. Do not package in paper or cardboard. Begins to lose one mole of water at approximately 50°C
Incompatible materials:	Organic materials. Reducing Agents, Nitrogen Containing Materials, Other oxidizers, acids, bases, oils, grease, sawdust, Dry Fire extinguishers containing monoammonium compounds.
Hazardous decomposition products:	Nitrogen trichloride, chlorine, and carbon monoxide – potential explosion hazard. A risk of explosion and/or of toxic gas formation exists with the following substances: Ammonia, Urea, Ammonium compounds, Bases, Acids. Wet material may generate nitrogen trichloride.

Section 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:	
Ingestion:	Irritation and/or burns can occur to the gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding, and/or tissue ulceration. Ingestion causes severe damage to the gastrointestinal tract with the potential to cause perforation.
Eye contact:	Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and corneal damage.
Skin contact:	Dermal exposure can cause severe irritation and/or burns characterized by redness, swelling, and scab formation. Prolonged skin exposure may cause permanent damage.
Inhalation:	Harmful if swallowed. Irritating to the nose, mouth, throat and lungs. It may also cause burns to the respiratory tract with the production of lung edema that can result in shortness of breath, wheezing, choking, chest pain, and impairment of lung function. Inhalation of high concentration can result in permanent lung damage from the corrosive action of the lung.
Acute Oral Toxicity:	LD ₅₀ = 500-1600 mg/kg (rat) (Merck)
Acute Inhalation Toxicity:	Quantitative data on the acute inhalation toxicity of this product are not available.
Acute Dermal Toxicity:	LD ₅₀ >5000 mg/kg (rabbit) (Merck)

Section 12: Ecological Information

Environmental fate, persistence and degradation:	Avoid contaminating waterways. This material is unstable in the environment because the available chlorine is rapidly reduced. Hydrolysis occurs within minutes. None of the hydrolysis products are persistent.
Bioaccumulative potential:	The product is subject hydrolysis within minutes, forming cyanuric acid and halogen moieties, which is inherently biodegradable. The material degrades relatively fast and is not considered to bioaccumulate.
Aquatic toxicity:	Very toxic to aquatic life with long lasting effects. LC ₅₀ = 0.25 mg/l/96h (Oncorhynchus mykiss)(ECOTOX Database)
Terrestrial toxicity:	Expected to be harmful to terrestrial species.

Section 13: Disposal Considerations

Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Keep spilled product out of trash containers, drains and sewers. Incompatible material can cause a reaction and combustion.	
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Endangers drinking water supplies if allowed to enter soil and/or waters in large quantities.
 Flush to drain with large quantities of water.
 Do not transport wet or damp material. Damp material should be neutralized.

Section 14: Transport Information

Road and Rail Transport:	Classified as a Dangerous Goods according to NZS 5433:1999 Transport of Dangerous Goods on Land - Land Transport (ADR/RID).
UN No:	3077
Class-primary	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DICHLOROISOCYANURIC ACID SODIUM SALT DIHYDRATE)
Hazchem Code:	2X
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:	3077
Class-primary	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DICHLOROISOCYANURIC ACID SODIUM SALT DIHYDRATE)
Air Transport:	Classified as Dangerous Goods by the criteria of the International Air Transport Association IATA Dangerous Goods Regulations (ICAO-TI/IATA DGR) for transport by air.
UN No:	3077
Class-primary:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DICHLOROISOCYANURIC ACID SODIUM SALT DIHYDRATE)

Section 15: Regulatory Information

HSNO Classification:	6.1D (oral), 6.4A, 9.1A (fish), 9.1A (crustacean), 9.1A (algal), 9.3C
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Section 16: Other Information

.Issue Date: May 2022

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