Safety Data Sheet
HY-CLOR 4 in 1 Granular Chlorine

DATE PREPARED: 21 May 2025

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**HY-CLOR 4 in 1 Granular Chlorine**
Chemical name:	Sodium Dichloroisocyanurate Dihydrate + Sodium Tetraborate Pentahydrate
Synonyms:	Triclosene sodium dihydrate, 1,35-triazine-2,46(1H,3H,5H)-trione, 1,3-dichloro- ,sodium salt dihydrate. + Disodium tetraborate anyhydrous, disodium tetraborate pentahydrate, borax pentahydrate
Product Code:	HYC4IN1CHL2
Recommended Use of the Chemical and Restrictions on Use:	Swimming pool disinfectant and sanitiser.
Supplier:	HY-CLOR AUSTRALIA PTY LTD
Street Address:	178 Power Street Glendenning NSW 2761
Telephone Number: **After Hours:**	02 8805 2400 (Aus) 09 973 2477 (Nz) 0404 859 515 (Aus)
Email:	help@hyclor.com.au
Emergency Telephone:	**Poisons Information Centre 131126 – 24 hours** **000 (Dial in case of transport emergency only)**

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

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2. HAZARDS IDENTIFICATION

This product is classified as a hazardous substance according to its GHS classification. This product is an Environmentally Hazardous Substance, Solid - meeting the description of UN 3077 and is not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported in packagings that do not incorporate a receptacle exceeding 500 kg(L); or (b) IBCs. (ADG 7.8 SP AU01).

Note: sodium dichloroisocyanurate dihydrate is excluded from the provisions of Dangerous Goods Codes in Division 5.1 under Special Provision 135. The Classification and Labeling database from the European Chemicals Agency and the Safe Work Australia HCIS database do not classify sodium dichloroisocyanurate dihydrate as an oxidising solid. However, the APVMA published first aid and safety directions for labelling requires the inclusion of the product being classified as an oxidising solid on the label. See section 14.

Poisons Schedule: S6. SIGNAL WORD: POISON

GHS Hazard Statement(s)

Oxidising Solid	Category 2	H2712	May Intensify fire: oxidizer
Acute Oral Toxicity	Category 4	H302	Harmful if swallowed
Eye irritation/corrosion	Category 1	H318	Causes serious eye damage
Skin irritation/corrosion	Category 2	H315	Causes skin irritation
Reproduction	Category 1B	H360	May damage fertility or the unborn child
Specific Target Organ Toxicity, Single Exposure	Category 3	H335	May cause respiratory irritation
Aquatic acute toxicity	Category 1	H400	Very Toxic to the aquatic life
Aquatic chronic toxicity	Category 1	H410	Very toxic to aquatic life with long lasting effects
Other		AUH031	Contact with acid liberates toxic gas

Precautionary statements

Prevention:

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P220: Keep/Store away from clothing, other chemicals, acids and combustible materials such as paper, fabric, sawdust or kerosene.
P221: Take any precaution to avoid mixing with combustibles, acids and other chemicals ...
P260: Do not breathe dust.
P264: Wash face and 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/ eye protection/ face protection.
P281: Use personal protective equipment as required.
P273: Avoid release to the environment. - if this is not the intended use.

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Response:

P301 + 312 +P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician if you feel unwell.

P302 + P352: IF 0N SKIN: Wash with plenty of soap and water.

P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P310+P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician

P308 + P313: IF exposed or concerned: Get medical advice/attention.

P332 + P313: If skin irritation occurs: Get medical advice/attention.

P362: P362 Take off contaminated clothing and wash before reuse.

P370+P378: In case of fire: Use water for extinction.

P391: Collect spillage.

Storage:

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

Disposal:

P501: Dispose of contents/container in accordance with local & regional waste disposal legislation

Hazard pictograms

GHS Signal word **DANGER**

Label Statements:	Keep out of reach of Children Fire and explosion hazard Read Label before use If medical advice is needed, have product container or label at hand.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Concentration (% w/w)
Sodium Dichloroisocyanurate Dihydrate	51580-86-0	90
Sodium Tetraborate Pentahydrate	12179-04-03	10

4. FIRST AID MEASURES

If poisoning occurs, or medical advice needed contact a Poisons Information Centre. Phone Australia 13 1126 or a doctor. Have this SDS when you call.

Swallowed:	Do not induce vomiting unless advised to do so from, a medical practitioner. Give a glass of water. Wash out mouth with water. Seek medical attention.
Skin:	Rinse with water then remove contaminated clothes. Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If irritation occurs seek immediate medical attention.
Eye:	If in eyes, remove contact lenses if present, hold eyes open, flood with water or normal saline solution for at least 15 minutes. Take care not to rinse contaminated water into the non-affected eye. If irritation occurs seek immediate medical attention.
Inhaled:	Remove from contaminated area. If breathing is difficult seek medical attention. Delayed effects from exposure to chlorine (decomposition product) can include shortness of breath, severe headache, pulmonary oedema and pneumonia.
Note to Physician	Treat symptomatically
First Aid Facilities	Eye wash and normal washroom facilities. First Aid Kit.
Medical Conditions that may be aggravated by exposure	Asthma and respiratory disease.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Flooding water spray from a distance. Do not use foam or dry agent.
Special hazards arising from the chemical:	Consider downwind evacuation. Remove ignition sources.
Special protective equipment and precautions for fire firefighters:	Sodium dichloroisocyanurate is a powerful oxidising agent and decomposes violently upon heating liberating oxygen. In case of fire, area must be evacuated and specialist fire fighters called. Only large quantities of water should be used as an extinguishing agent. 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. Attending fire fighters should keep upwind if possible and wear full protective equipment including rubber boots and self-contained breathing apparatus. A fire in the vicinity of sodium dichloroisocyanurate should be extinguished in the most practical manner but avoid contaminating this material with the fire fighting agent, including water. Decomposes on contact with water evolving toxic chlorine gas and in the presence of small amounts of water, the explosive gas nitrogen trichloride. Once fire is extinguished, wash area thoroughly with excess water. Ensure that drains are not blocked with solid material. Maintenance of excess water during cleaning up operation is essential. Combustible material involved in the incident should be removed to a safe open area for controlled burning or for further drenching with water prior to collection for disposal. 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.
Hazchem Code:	1W

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedure	Evacuate all unnecessary personnel. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do it without risk. Do not get water inside containers. Avoid skin and eye contact and inhalation of dust. Wear appropriate protective equipment and clothing – See section 8. Use in a well-ventilated area. Keep containers closed when not in use. Air-supplied masks are recommended to avoid inhalation of toxic material.
Environmental precautions	Keep spilt products out of drains, sewers and waterways. If large quantities of this material enter the waterways contact the Environmental Protection Authority, or your local Waste Management Authority.
Methods and materials for containment and cleaning up	For **minor spills**, Sweep up, place in a sealed container and place in garbage. Wash area down with excess water. DO NOT return spilled material to original container for re-use. DO NOT add small amounts of water to sodium dichloroisocyanurate dihydrate. Sweep up, avoiding generation of dust, then immediately spread as a thin layer in uncontaminated, dry, open area to reduce the possibility of local hot spots forming. 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. To neutralise add sodium sulphite (2.4 kg/kg product). If no active chlorine remains, add soda ash (1.1 kg/kg product) to effect complete neutralisation. For large spills contact the emergency response number.

7. HANDLING AND STORAGE

Keep out of the reach of children.

Precautions for safe handling	Avoid skin and eye contact and breathing in dust. Wear appropriate protective equipment and clothing. Remove contaminated clothing. Use in a well-ventilated area. Avoid spillage onto floor. Maintain personal hygiene by washing hands prior to eating, drinking, smoking or using toilet.
Safe storage, including any incompatibilities	Store in a cool, dry well-ventilated area, out of direct sunlight. Store in labelled, original containers. Keep containers tightly closed and upright. Avoid spillage onto the floor. Do not allow into contact with water. Store away from sources of ignition, heat and incompatible materials described in Section 10.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits: Exposure limits have been established by Safe Work Australia for a component of this product.

Appropriate Engineering Controls:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Avoid generating and inhaling dusts. Use in a well-ventilated area only. Keep containers in a well-ventilated area. Local exhaust ventilations system may be required, especially if chlorine gas evolved.

Personal Protective equipment - for manufacturing and bulk handling situations:

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.

Skin Protection:	Suitable protective clothing should be worn e.g. cotton overalls and safety shoes. Wear gloves of impervious material such as nitrile rubber (glove thickness 0.11 mm & breakthrough time > 480 min) that comply with AS/NZS 2126. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken.
Eye Protection:	Tightly fitting safety goggles or full-faced shields as appropriate recommended and that comply with AS/NZS 1336 and 1337. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken.
Respiratory Protection:	Respiratory protection is not normally necessary, unless the production of dust is significant or toxic gases are evolved. In such cases, a suitable respirator may be worn that meets the requirements of AS/NZS 1715 and 1716.
Personal Hygiene:	Always wash hands after handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to free-flowing powder	**Vapour density:**	No data found
Odour:	Chlorine	**Relative density:**	No data found
pH:	6.5 (1% solution)	**Water solubility:**	Sodium dichloroisocyanurate: 22.7 g/100 mL at 25°C Sodium Tetraborate Pentahydrate: $5.93X10^4$ mg/L at 25°C
Melting point / freezing point:	Sodium dichloroisocyanurate: 230 - 250 °C (decomposes)	**Partition coefficient n-octanol/water:**	No data found

	Sodium Tetraborate Pentahydrate: 75 °C (decomposes) :		
Initial boiling point and boiling range:	Not applicable	**Auto-ignition temperature:**	Not applicable
Flash point:	Not flammable	**Decomposition temperature:**	Sodium dichloroisocyanurate: 230 - 250 ° Sodium Tetraborate Pentahydrate: 75 °C
Evaporation rate:	No data found	**Viscosity:**	Not applicable
Flammability:	Not flammable	**Explosive properties:**	Not explosive
Upper/lower flammability limits:	Not flammable	**Oxidising properties:**	Strong oxidiser (GHS Cat 2)
Vapour pressure:	Negligible.		

10. STABILITY AND REACTIVITY

Reactivity:	Contact with small amounts of water (versus large, solubilizing quantities), may result in exothermic reaction with the liberation of toxic fumes such as chlorine gas, nitrogen trichloride liquid boron gas. Reacts explosively with calcium hypochlorite in the presence of water. Reacts with ammonia or amines producing nitrogen trichloride. Reacts with most reducing agents.
Chemical Stability:	Rapidly decomposes on exposure to air. May decompose violently if exposed to heat or direct sunlight. Stable if stored and handled under recommended conditions.
Possibility of hazardous reactions:	This product will not undergo polymerisation reactions. Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. When heated to decomposition it emits toxic fumes of boron.
Conditions to avoid:	This product should be kept in a cool place, preferably below 30 Deg C. Keep containers tightly closed. Containers should be kept dry. Keep containers and surrounding areas well ventilated. Keep away from heat, flames and sparks. Keep isolated from combustible materials .
Incompatible materials:	Acids, water, zinc, tin, aluminium and their alloys, organic chemicals, alkaloidal salts, mercuric chloride, zinc sulfate, and other metallic salts nitrogen containing compounds, oxidisers, dry fire extinguishers containing monoammonium phosphates.

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11. TOXICOLOGICAL INFORMATION

No data available for the product. Information given is based on the components: Sodium Dichloroisocyanurate Dihydrate (90% w/w) and Sodium Tetraborate Pentahydrate, (10% w/w).

Acute Oral	Harmful if swallowed. Ingestion may cause nausea, Vomiting, diarrhoea and irritation of the gastrointestinal tract. Sodium Dichloroisocyanurate Dihydrate: Oral LD_{50} (rat) = 1670 mg/kg. Sodium Tetraborate Pentahydrate: Oral LD_{50} (rat) = 2260 mg/kg.
Acute Dermal	Sodium Dichloroisocyanurate Dihydrate: LD_{50} (rabbit = > 10,000 mg/kg. Sodium Tetraborate Pentahydrate: LD_{50} (rabbit) >1055 mg/kg.
Skin corrosion/irritation	May cause skin irritation. Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with absorption through large areas of severely damaged skin. These may include delayed effects of skin redness and peeling.
Serious eye damage/eye irritation	Causes burns and is a severe eye irritant.
Inhalation	Irritant to the mucous membranes of the respiratory tract (airways). Inhalation of high concentrations may result in shortness of breath, chest pain, severe headache and lung damage including pulmonary oedema. Effects may be delayed.. May irritate nose and mouth. Sodium Dichloroisocyanurate Dihydrate: 4-hour LC_{50} (rat) >2.7 mg/m^3. Sodium Tetraborate Pentahydrate: 4-hour LC_{50} (rat) >2 mg/m^3.
Respiratory or skin sensitisation	No data found for skin or respiratory sensitisation.
Mutagenicity	Sodium Dichloroisocyanurate Dihydrate: Negative in several *in vitro* and *in-vivo* investigations. Sodium Tetraborate Pentahydrate: Bacterial and limited mammalian assay results have been negative.

Reproduction/Development	Sodium Dichloroisocyanurate Dihydrate: When given orally to pregnant mice from day 6 to 15 of gestation, did not show significant teratogenic effects. It did not show neonatal toxicity. Sodium Tetraborate Pentahydrate: Animal feeding studies with boric acid and sodium tetraborate in rat, mouse and dog at high doses have demonstrated effects on fertility and testes. Studies with the chemically related boric acid in rat, mouse and rabbit, at high doses, demonstrate developmental effects on the foetus including foetal weight loss and minor skeletal variations. The lowest NOAEL is 9.6 mg B/kg in rats, based on developmental effect.
Carcinogenicity	Not classified. No evidence of carcinogenic effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Sodium Dichloroisocyanurate Dihydrate: Rats and dogs fed 16.6 ppm to 333 ppm in their diet for 6 months showed no signs of toxicity or organ damage. Sodium Tetraborate Pentahydrate: sodium tetraborate in drinking water (3 g/L). Cerebral succinate dehydrogenase activity increased after 10 and 14 weeks of exposure. Increased RNA concentration and increased acid proteinase activity in brain occurred after 14 weeks. NADPH-cytochrome c reductase activity and cytochrome b5 content decreased in the liver microsomal fraction after 10 and 14 weeks. A reduction in the cytochrome P-450 concentration was detected at 14 weeks.
Aspiration hazard	Not applicable.

12. ECOLOGICAL INFORMATION

No data available for the product. Information given is based on the components: Sodium Dichloroisocyanurate Dihydrate (30 - 60% w/w) and Sodium Tetraborate Pentahydrate, (10% w/w).

Aquatic toxicity	Sodium Dichloroisocyanurate Dihydrate: Lowest found toxicity. Fish - LC_{50} = 15 mg/L (Bluegill). Non-vertebrate: 48 hour LC_{50} = 110 µg/L (*Daphnia magna).* Sodium Tetraborate Pentahydrate: Lowest found toxicity Fish: - LC_{50} = 283 µg/L (Bluegill). Non-vertebrate: 48-hour LC_{50} = 141 mg/L (*Daphnia magna).*

Algae: Green 96-hour EC_{50} = 158 mg/L

Persistence and degradability	Sodium Dichloroisocyanurate Dihydrate: No data found. Sodium Tetraborate Pentahydrate: Average persistence is one or more years, depending on soil type and rainfall. Less persistent in acid soils and in high rainfall areas
Bioaccumulative potential:	Sodium Dichloroisocyanurate Dihydrate: No data found. Sodium Tetraborate Pentahydrate: No data found.
Mobility in soil	Sodium Dichloroisocyanurate Dihydrate: No data found. Sodium Tetraborate Pentahydrate: Adsorbed by mineral portion of soil. Slowly leached
PBT identification:	Sodium Dichloroisocyanurate Dihydrate: not a PBT. Sodium Tetraborate Pentahydrate: Proposed by EU (2010) as a CMR cat 1 or 2, PBT, vPvB or a substance of an equivalent level of concern. .
Other adverse effects:	None known.

13. DISPOSAL CONSIDERATIONS

Disposal: Rinse empty containers in the pool and dispose of by wrapping with paper and putting in garbage. For larger quantities, refer to Refer to local government authority for disposal recommendations. Dispose of material through a licensed waste contractor. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

14. TRANSPORT INFORMATION

Consult the ADG 7.8, IMDG and ICAO/IATA Codes for all the transport requirements for the specified UN Number.

Special Provision 135 in ADG 7.8 2022 for UN 2465 exempts the dihydrated sodium salt of dichloroisocyanuric acid does not meet the criteria for inclusion in Division 5.1 and is not subject to this Code unless meeting the criteria for inclusion in another Class or Division.

This product is an Environmentally Hazardous Substance, Solid - meeting the description of UN 3077 and is not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported in not exceeding 500 kg. (ADG 7.8 SP AU01).

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	Land Transport (ADG 7.8)	Sea Transport (IMDG)*	Air Transport (ICAO/IATA*)
UN Number	3077	3077	3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sodium dichloroisocyanurate, dihydrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sodium dichloroisocyanurate, dihydrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sodium dichloroisocyanurate, dihydrate)
Transport Hazard Class	9	9	9
Packaging Group	III	III	III
Marine Pollutant		Yes	Yes

'* Consult IMDG Code for sea transport and ICAO/IATA Code for air transport provisions and instructions.

Hazchem: 2Z HIN: 90

15. REGULATORY INFORMATION

Poisons Standard (Scheduling):	Schedule 6 (Chlorinating Compounds)
APVMA Product Number:	81307
Listing in the Australian Inventory of Chemical Substances (AICS)	Not applicable for APVMA registered products

16. OTHER INFORMATION

ADG	Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.5, 2017
AS/NZS	Australian Standard/New Zealand Standard
CAS Number:	Unique Chemical Abstracts Service Registry Number
EC_{50}:	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species).
GHS:	Globally Harmonized System of classification and labelling of chemicals (GHS)
Hazchem Code:	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HCIS:	Hazardous Chemical Information System (http://hcis.safeworkaustralia.gov.au/HazardousChemical)
IARC:	International Agency for Research on Cancer
LD_{50}:	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).

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IDLH:	Immediately dangerous to life or health (IDLH) is defined by the US National Institute for Occupational Safety and Health (NIOSH)
LC_{50}:	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population.
NTP:	National Toxicology Program (USA)
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.
SDS:	Safety Data Sheet
STEL:	Short term exposure limit (STEL) means the time-weighted average maximum airborne concentration of a substance calculated over a 15-minute period.
TWA:	8-hour Time-weighted average (TWA) means the maximum average airborne concentration of a substance when calculated over an eight-hour working day, for a five-day working week.
WES:	Workplace exposure standard
UN Number:	United Nations Dangerous Goods Number

References:

Work Safe Australia Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (June 2023). The exposure standards comply with the Australian Workplace Exposure Standards for Airborne Contaminants. The Dangerous Goods Classification complies with the Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.8, 2022. Other information from ChemIDPlus and linked databases and the European Chemicals Agency Classification and Labelling database. SDS for components,

Sections Revised: Section 2 Header

Replaces revision: n/a

Disclaimer

This Safety Data Sheet (SDS) has been prepared in compliance with the Work Safe Australia Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (June 2023). The information in this SDS should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Hy-Clor Australia Pty. Limited shall not be held liable for any damage resulting from handling or from contact with the above product.