Safety Data Sheet
HY-CLOR 3 in 1 CONCENTRATED CHLORINE

Date Reviewed: 29 April 2024
Replaces: 22 February 2024
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1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**HY-CLOR 3 IN 1 CONCENTRATED CHLORINE Also registered as HY-CLOR SALT SHOCK & HY-CLOR MULTI CONCENTRATE**
Chemical Name:	Sodium Dichloroisocyanurate Dihydrate
Synonyms:	Triclosene sodium dihydrate, 1,35-triazine-2,46(1H,3H,5H)-trione, 1,3-dichloro-,sodium salt dihydrate
Product Code:	**HYCCONCHL02 and HYCCONCHL10**
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:	02 8805 2400 (Aus)
After Hours:	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"

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 not exceeding 500 kg. (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.

Poisons Schedule: S6. SIGNAL WORD: POISON

GHS Category and Hazard Statement(s)

Oxidising Solid - Category 2	H272	May Intensify fire: oxidizer
Acute toxicity – category 4	H302	Harmful if swallowed
Acute toxicity – category 4	H332	Harmful if inhaled
Skin corrosion irritation – category 2	H315	Causes skin irritation
Eye damage/irritation – category 1	H318	Causes serious eye damage

Specific target organ toxicity (single exposure) – category 3	H335	May cause respiratory irritation
Hazardous to the aquatic environment (acute) – category 1	H400	Very Toxic to aquatic life
Hazardous to the aquatic environment (chronic) – category 1	H410	Very Toxic to aquatic life with long lasting effects
Australian Human Health Hazard	AUH031	Contact with acid liberates toxic gas

Precautionary statements
Prevention:
P202: Do not handle until all safety precautions have been read and understood
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220: Keep away from clothing and other combustible materials.
P261: Avoid breathing fumes, mist or dust.
P264: Wash contacted areas thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment. - if this is not the intended use
P280: Wear eye protection and protective gloves

Response:
P371+P380+P375: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
P370+P378: In case of fire: Use foam or carbon dioxide to extinguish.
P301+P312**:** IF SWALLOWED: call a Poison Centre or doctor if felling unwell
P301+P330+P331: IF SWALLOWED: rinse mouth, Do NOT induce vomiting
P330: Rinse mouth
P302+P352: IF ON SKIN: Wash with plenty of soap and water
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312: Call a POISON CENTER or doctor if you feel unwell.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor
P305+P360: IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P308+P313: IF exposed or concerned: Get medical advice/attention
P332+P313: If skin irritation occurs: Get medical advice/attention
P362+P364: Take off contaminated clothing and wash it before reuse
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

GHS SIGNAL WORD: DANGER

Hazard Pictograms:

Label Statements:	KEEP OUT OF REACH OF CHILDREN FIRE AND EXPLOSION HAZARD READ SAFETY DIRECTIONS BEFORE OPENING OR USING

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Concentration (% w/w)
Sodium Dichloroisocyanurate Dihydrate	51580-86-0	100

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 Equipment	Powder, carbon dioxide, foam. Do not use ABC extinguishers containing nitrogen, due to risk of violent chemical reaction.
Specific Hazards Arising from the Chemical	In case of fire, the following can be released: nitrogen oxides (NOx), hydrogen chloride (HCl), chlorine.
Special Protective Equipment and Precautions for Firefighters	Self-contained breathing apparatus with full-face mask and full protective clothing (standard wear)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	**For non-emergency personnel:** Avoid contact with skin and eyes. Avoid formation of dust. Provide appropriate exhaust ventilation at places where dust is formed. Keep unnecessary people away, isolate hazard area and deny entry. This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. **For emergency responders:** Wear an appropriate approved respirator if dust is generated.
Environmental precautions	Try to prevent the material from entering drains or water courses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.
Methods and materials for containment and cleaning up	DO NOT add water to spilled materials. DO NOT use floor sweeping compounds to clean up spills. Sweep and scoop spilled material into clean, dedicated equipment. Every attempt should be made to avoid mixing spilled material with other chemicals or debris when cleaning up. DO NOT attempt to reseal any contaminated drums. DO NOT transport wet or damp material.

7. HANDLING AND STORAGE

Precautions for safe handling	Do not get in eyes, on skin or on clothing. Avoid breathing vapours when opening container. Avoid creation of dust. Wash thoroughly after handling. Never add water to the product. Always add product to large quantities of water. Use clean dry utensils. Do not add the product to any dispensing device containing residuals of other products. Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities	Store and handle in accordance with current regulations and standards. Do not allow water to get in container. Keep container tightly closed and properly labelled. Store containers on pallets. Keep away from food, drink and animal feed. Keep separated from incompatible substances.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits have not been established by Safe Work Australia for this product. No special equipment is usually needed when occasionally handling small quantities.

Engineering Measures: 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.

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 for chlorine and dust inhalation protection..
Personal Hygiene:	Ensure a high level of personal hygiene is maintained when using this product. Always wash hands before eating, drinking, smoking or using the toilet

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to cream, dry 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
Melting point / freezing point:	Sodium dichloroisocyanurate: 230 - 250 °C (decomposes)	**Partition coefficient n-octanol/water:**	Log P0/w -056

Initial boiling point and boiling range:	Not applicable	**Auto-ignition temperature:**	Not applicable
Flash point:	Not flammable	**Decomposition temperature:**	Sodium dichloroisocyanurate: 230 - 250 ° Sodium bromide: .775 °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
Vapour pressure:	< 0.006 Pa	**Molecular Formula**	$C_3Cl_2N_3O_3.Na.2H_2O$
		Molecular Weight	255.98

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 and nitrogen trichloride liquid. 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 bromine and sodium oxide.
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, heavy metal salts, nitrogen containing compounds, oxidisers, dry fire extinguishers containing monoammonium phosphates.
Hazardous decomposition products	Nitrogen oxides (NOx), hydrogen chloride (HCl), chlorine.

11. TOXICOLOGICAL INFORMATION

No data available for the product. Information given is based on the components: Sodium Dichloroisocyanurate Dihydrate

Acute Oral	Harmful if swallowed. Ingestion may cause nausea, Vomiting, diarrhoea and irritation of the gastrointestinal tract. Oral LD_{50} (rat) = 1670 mg/kg.
Acute Dermal	LD_{50} (rabbit = > 10,000 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. 4-hour LC_{50} (rat) >2.7 mg/m^3.
Respiratory or skin sensitisation	No data found
Mutagenicity	Negative in several *in vitro* and *in-vivo* investigations.
Reproduction/Development	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.
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 mo showed no signs of toxicity or organ damage.
Aspiration hazard	Not applicable.

12. ECOLOGICAL INFORMATION

No data available for the product. Information given is based on the components: Sodium Dichloroisocyanurate Dihydrate.

Aquatic toxicity	Sodium Dichloroisocyanurate Dihydrate: Lowest found toxicity Fish - LC_{50} = 0.24 mg/L (Bluegill Non-vertebrate: 48 hour LC_{50} = 110 µg/L (*Daphnia magna)*
Persistence and degradability	Under test conditions no biodegradation observed..
Bioaccumulative potential:	No data found.
Mobility in soil	Koc: ca. 51
PBT identification:	Not a PBT.

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13. DISPOSAL CONSIDERATIONS

Disposal: Rinse empty containers in the pool and dispose of by 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 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).

	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 Code: 2Z HIN: 90

15. REGULATORY INFORMATION

Poisons Standard (Scheduling):	Schedule 6
APVMA Product Number:	66084
Listing in the Australian Inventory of Chemical Substances (AICS)	Not applicable for APVMA registered products

16. OTHER INFORMATION

Glossary:

ADG	Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.8, 2023
AS/NZS	Australian Standard/New Zealand Standard
CAS Number:	Unique Chemical Abstracts Service Registry Number
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).
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,

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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.