

1. Identification of Substance & Company

Product

Product name	Safe-T-chlor
HSNO approval	HSR003823
Approval description	Sodium dichloroisocyanurate, dihydrate
UN number	3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sodium Dichloro-s-triazinetrione dihydrate)
DG class	9
Packaging group	III
Hazchem code	3Z
Uses	Pool Chemical

Company Details

Company	Poolwise Ltd
Address	3 McGee Street Otahuhu Auckland New Zealand
Telephone	09 276 7870
Fax number	09 276 7876
Website	www.poolwise.co.nz

Emergency Telephone Number: 0800 764 766

2. Hazard Identification

Approval and

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR003823, Sodium dichloroisocyanurate, dihydrate), and is classified as follows:

Classes	Hazard Statements
6.1D (oral)	Harmful if swallowed.
6.4A	Causes serious eye irritation.
9.1A	Very toxic to aquatic life with long lasting effects.
9.3C	Harmful to terrestrial vertebrates.

SYMBOLS

WARNING



Other Classifications

6.9 (respiratory irritation)	May cause respiratory irritation.
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Classification in the EU according to GHS:

Acute Tox 4 H302, Harmful if swallowed.

Eye irrit 2 H319, Causes serious eye irritation.

STOT Single Exp. 3 H335, May cause respiratory irritation.

Aquatic Acute 1 H400, Toxic to aquatic life.

Aquatic Chronic 1 H410, Very toxic to aquatic life with long lasting effects.

EUH031: Contact with acids liberates toxic gas.

Precautionary Statements

Keep out of reach of children.
Read label before use.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear eye/face protection.
Avoid breathing dust/fumes.
Use only outdoors or in a well-ventilated area.

Avoid release to the environment.
Collect spillage.

Further precautionary statements can be found in Section 4 – First Aid.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Sodium dichloroisocyanurate, dihydrate (SDIC)	51580-86-0	>98%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities Ready access to running water is required. Accessible eyewash is required.

Exposure

Swallowed	IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation persists: Get medical advice.
Skin contact	Wash immediately with plenty of water. Remove contaminated clothing. If irritation occurs, seek medical attention.
Inhaled	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards:	It is not classed as flammable. However there is a risk of dust explosion. The anhydrous material is considered oxidising and can intensify a fire. An ambient fire may liberate toxic vapours (chlorine, hydrogen chloride, NOx)
Suitable extinguishing substances:	Do not use drychemical, carbon dioxide or halogenated extinguishing agents.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Chlorine, Hydrogen chloride, hydrogen cyanide, Nitrous gases, phosgene. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	Self contained breathing apparatus, protective clothing.
Hazchem code:	3Z

6. Accidental Release Measures

Containment	If greater than 100kg is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to stormwater.
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust on concentrate. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Clean-up method	Use absorbent (soil, sand or other inert material). Collect (sweep or vacuum) and seal in properly labelled containers or drums for disposal. Avoid the creation of dust. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Sweep up or vacuum and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours/dusts. Work up wind or increase ventilation.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards


A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 10mg/m³ for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (2013)	Ingredient	WES-TWA	WES-STEL
	Sodium dichloroisocyanurate, dihydrate:	no data	no data
	chlorine gas	0.5ppm, 1.5mg/m ³	1ppm, 2.9mg/m ³

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety in Employment Act 1992 (HSE). Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes		Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible.
Skin		Protective gloves and clothing are not normally necessary. However, it is prudent to wear gloves when handling chemicals in bulk or for an extended period of time. Nitrile, NBR or PVC gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use.

Respiratory



A respirator when airborne concentrations approach the WES (section 8). Use a full face respirator with a particulate filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	white granules
Odour	chlorine
pH	6.1-7 at 25°C (1% aqueous solution)
Vapour pressure	no data
Viscosity	no data
Boiling point	no data
Volatile materials	0%
Freezing / melting point	no data
Solubility	285g/L in water at 25°C
Specific gravity / density	900-1000kg/m ³ at 20°C
Flash point	no data
Danger of explosion	no data
Auto-ignition temperature	decomposition: 240-250°C
Upper & lower flammable limits	non flammable
Corrosiveness	non corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	organic compounds, ammonia, urea, ammonium compounds, bases, acids, reducing agents.
Substance Specific Incompatibility	Heat will cause decomposition.
Hazardous decomposition products	Chlorine, hydrogen chloride. Hydrogen cyanide, Oxides of nitrogen, nitrogen chloride compounds, phosgene.
Hazardous reactions	Decomposition occurs with heat , acids and/or water to liberate toxic gases.

11. Toxicological Information

Summary

IF SWALLOWED: harmful if swallowed.
 IF IN EYES: causes serious eye irritation.
 IF ON SKIN: not classed as an irritant, but if left on skin for some time, irritation may develop.
 IF INHALED: may be harmful if inhaled. May cause respiratory irritation.

CHRONIC SYMPTOMS: no known chronic effects. This substance is not considered a carcinogen, mutagen or reproductive/developmental effector.

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: Sodium dichloroisocyanurate, dihydrate 500-1600mg/kg (rat).
	Dermal	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (dermal, rat) for the mixture is >5000 mg/kg. Data considered includes: Sodium dichloroisocyanurate, dihydrate >5000mg/kg (rabbit).
	Inhaled	Using LC ₅₀ 's for ingredients, the calculated LC ₅₀ (inhalation, rat) for the mixture is >5,000 ppm. Data considered includes: Sodium dichloroisocyanurate, dihydrate no data available.
	Eye	The mixture is considered to be an eye irritant, because some of the ingredients present are considered eye irritants in more concentrated form.
	Skin	The mixture is not considered to be a skin irritant.

Chronic	Sensitisation Mutagenicity Carcinogenicity Reproductive / Developmental Systemic Aggravation of existing conditions	No ingredient present at concentrations > 0.1% is considered a sensitizer. No ingredient present at concentrations > 0.1% is considered a mutagen. No ingredient present at concentrations > 0.1% is considered a carcinogen. No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation. No ingredient present at concentrations > 1% is considered a target organ toxicant. None known.
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12. Ecological Data

Summary

No specific data is available for this product. Where available, ecotoxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below. The product is considered to have the following ecotoxicity groups:

Supporting Data

Aquatic	Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is < 1 mg/L. Data considered includes: Sodium dichloroisocyanurate, dihydrate 0.25mg/L (96hr, Rainbow trout), 0.28mg/L (48hr, Daphnia magna).
Bioaccumulation	not readily biodegradable
Degradability	No data
Soil	EPA has not classified the mixture as ecotoxic in the soil environment. The soil toxicity value for the mixture is ≥ 100 mg/kg.
Terrestrial vertebrate	The mixture has been classified by EPA as harmful to terrestrial vertebrates. Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is between 500 and 2,000 mg/kg. Data considered includes: Sodium dichloroisocyanurate, dihydrate 500-1600mg/kg (rat).
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.
Biocidal	no data
Environmental effect levels	No EELs are available for this mixture or ingredients

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Rinse containers with water before disposal. Preferably re-cycle container, otherwise send to landfill or similar.

14. Transport Information

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a hazardous substance for transport.

UN number:	3077	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sodium Dichloro-s-triazinetrione dihydrate)
Class(es)	9	Packing group:	III
Precautions:	Ecotoxic.	Hazchem code:	3Z
IMDG			
UN number:	3077	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sodium Dichloro-s-triazinetrione dihydrate)
Class(es)	9	Packing group:	III
Precautions:	Marine pollutant	EmS	F-A, S-F
IATA			
UN number:	3077	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Sodium Dichloro-s-triazinetrione dihydrate)
Class(es)	9	Packing group:	III
Precautions:	Ecotoxic.		

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR003823, Sodium dichloroisocyanurate, dihydrate.

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing > <i>any quantity</i> .
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Required if > 100kg is stored.
Approved handler	Not required.
Tracking	Not required.
Bundling & secondary containment	Required if > 100kg is stored.
Signage	Required if > 100kg is stored in any one location.
Location test certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval HSR003823, Sodium dichloroisocyanurate, dihydrate Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ERMA	Environmental Risk Management Authority (now EPA)
EPA	Environmental Protection Agency (previously known as ERMA)
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
OSH - DoL	The Occupational Safety and Health Service of the Department of Labour (NZ)
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID) http://www.epa.govt.nz/hs/compliance/chemicals.html , for specific chemicals.
EPA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
Controls Matrix	Part of the EPA New Zealand User Guide to the HSNO Control Regulations
WES 2013	The NZ Workplace Exposure Standards Effective from 2013, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
Other References:	Suppliers SDS (China), GESTIS (germany)

Review

Date	Reason for review
May 2015	Not applicable – new SDS

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: +64 9 940 30 80.

