1. Identification of Substance & Company

Product	
Product name	Safe-T-chlor
Other names	Spa Chlorine
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	93 Ireland Road, Mt Wellington, 1060, Auckland New Zealand
Telephone	09 527 0753
Fax number	09 527 4189
Website	www.poolwise.co.nz

Emergency Telephone Number: 0800 764 766

2. Hazard Identification

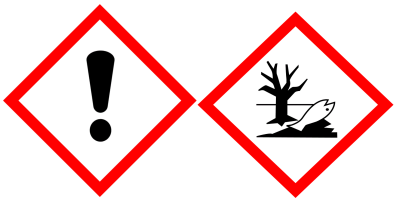
Approval and

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR003823, Sodium dichloroisocyanurate, dihydrate). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2017.

Classes	Hazard Statements
6.1D (oral)	H302 - Harmful if swallowed.
6.1E (respiratory irritation)	H335 - May cause respiratory irritation.
6.4A	H319 - Causes serious eye irritation.
9.1A	H410 - Very toxic to aquatic life with long lasting effects.
9.3C	H433 - Harmful to terrestrial vertebrates.

SYMBOLS

WARNING



Other Classifications

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

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P261 - Avoid breathing dust/fume.
P264 - Wash 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.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P330 - Rinse mouth.
P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTRE or doctor/physician 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. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.

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 vaccum 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 3mg/m^3 for respirable particulates and 10mg/m^3 for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	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 at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. 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
Viscocity	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**	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

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 Hazardous Substances (Disposal) Notice 2017 and 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	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is renedered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

14. Transport Information

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good 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.
All ingredients appear on the NZIoC.

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 any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 100kg is stored.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if > 100kg is stored.
Signage	Required if > 100kg is stored in any one location.
Location compliance 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 and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, 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).
EC_{50}	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
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/UEL	Lower Explosive Limit/ Upper Explosive Limit
LD_{50}	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC_{50}	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
NZIoC	New Zealand Inventory of Chemicals
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
PES	Prescribed Exposure Standard means a WES or a biological exposure standard that is prescribed in a regulation, a safe work instrument or an approval under HSNO (including group standards).
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)
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 during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz, Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz.
Other References:	Suppliers SDS, EU ECHA, ingredients SDS's, ChemIDplus, GESTIS

Review

Date	**Reason for review**
May 2015	Not applicable – new SDS
August 2018	Update, addition of new name

Disclaimer