

**MATERIAL SAFETY DATA SHEET****SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**Product Name:** SODIUM DICHLOROISOCYANURATE, DIHYDRATE  
**Trade Name:** SAFE-T-CHLOR, SPA CHLORINE  
**Synonym(s):** Sodium Dichloroiso-s-triazinetriene Dihydrate Spa Chlorine  
**Product Use:** Pool Chemical  
**Supplier Name:** Poolcare Ltd  
**Address:** 54A Hewletts Road Mount Maunganui  
**Telephone:** +64 7 575 8471  
**Fax:**  
**Email:** admin@poolcareltd.nz  
**Website:** Poolcareltd.nz  
**Emergency Number(s):** For advice, contact the National Poisons Centre (New Zealand: Phone 0800 764 766) or a doctor.

**SECTION 2: HAZARDS IDENTIFICATION**

This product has been approved under the Hazardous Substances and New Organisms (HSNO) Act. Approval HSR 003823, Sodium Dichloroisocyanurate, Dihydrate) and is classified below.

**Approval No:** HSR 003823.  
**UN No:** 3077.  
**DG Class:** 9.  
**Hazchem Code:** 3Z.  
**Packing Group:** III.  
**HSNO Classifications:** 6.1D Acutely Toxic if swallowed.  
6.4A Serious eye irritation.  
9.1A Very ecotoxic to aquatic life with long lasting effects.  
9.3C Harmful to terrestrial vertebrates.

**Warning Symbols:**



**Classification in the EU according to GHS:** Acute Toxic 4 H302, Harmful if swallowed.  
Eye Irritant 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 releases toxic gas.

**Precautionary Statements:** Keep out of reach of children.  
Read label before use.

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Store in a well-ventilated place.

Keep container tightly closed.

Store locked up.

**Personal Care:**

Wash hands thoroughly after handling.

Do not eat, drink, or smoke when using this product.

Wear eye/face protection.

Avoid breathing fumes/dust.

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.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Component:** Sodium Dichloroisocyanurate, Dihydrate (SDIC).

**CAS/Identification No:** 51580-86-0.

**Concentration %:** >98%.

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

**SECTION 4: FIRST AID MEASURES**

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel you may have been harmed or irritated by this product. **The New Zealand 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.

**Inhalation:**

If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Call the National Poisons Centre: (Phone New Zealand 0800 764 766) or a doctor if you feel unwell.

**Advice to Doctor:**

Treat symptomatically.

**MATERIAL SAFETY DATA SHEET****SECTION 5:****FIRE FIGHTING MEASURES**

- Fire and Explosion Hazard:** 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 release toxic vapours (Chlorine, Hydrogen Chloride, NOx).
- Hazchem Code:** 3Z.
- Suitable Extinguishing Substances:** Do not use dry chemical, 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 lowlying spaces forming potentially explosive mixtures.
- Protective Equipment:** Self-contained breathing apparatus, protective clothing.

**SECTION 6:****ACCIDENTAL RELEASE MEASURES**

- Containment:** If greater than 100 kg is stored, secondary containment and emergency plans to manage any potential spill must be in place.  
In all cases design storage to prevent discharge to storm-water.
- Emergency procedures:** In-case of spillage, alert the fire brigade and give a 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 the 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 happens. Contact your regional council immediately.
- Clean Up Method:** Use absorbent soil, sand or other inert material.  
Collect (sweep or vacuum) up and seal in properly labelled containers or drums for disposal.  
Avoid the creation of dust.  
If contamination of crops, sewers or waterways occurs, advise your local emergency services.
- Disposal:** Sweep or vacuum and collect recoverable material into labelled containers for recycling or salvage.  
Recycle containers where ever possible.  
The material may be suitable for approved landfill.  
Dispose of only in accordance with the regulations.
- Precautions:** Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours/dust.  
Work upwind or increase ventilation.

**SECTION 7:****HANDLING AND STORAGE**

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**Handling:** Keep exposure to a minimum and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.

**Storage:** Avoid storage of harmful substances with food.  
Store out of reach of children.  
Keep containers closed to minimise contamination.  
Keep away from extreme heat.

**SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Workplace Exposure Standards**

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 10 mg/m<sup>3</sup> for dust and mist 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	0.5 ppm 1.5 mg/m <sup>3</sup>	1 ppm 2.9 mg/m <sup>3</sup> .

**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 of modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe airborne concentrations of mist, dust 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 extended periods 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.

**SECTION 9: PHYSICAL AND 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%.

**Solubility:** 285 g/L in water at 25°C.

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**Flash point:** No data.  
**Danger of Explosion:** No data.  
**Corrosiveness:** Not corrosive.  
**Freezing/melting point:** No data.  
**Specific gravity /density:** 900-1000 kg/m<sup>3</sup> at 20°C.  
**Auto-Ignition Temperatures:** Decomposition: 240-250°C. **Upper & Lower Flammable Limits:** Non-flammable.

**SECTION 10: STABILITY AND REACTIVITY**

**Stability:** Stable.  
**Conditions to be avoided:** Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.  
**Incompatibles 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 release toxic gases.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**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 product is not considered a carcinogenic, mutagen or reproductive/developmental effector.  
**Acute:**  
**Oral:** Using LD<sub>50</sub>'s for ingredients, the calculated LD<sub>50</sub> (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes Sodium Dichloroisocyanurate Dihydrate 500-1600 mg/kg (rat).  
**Dermal:** Using LD<sub>50</sub>'s for ingredients, the calculated LD<sub>50</sub> (dermal, rat) for the mixture is >5,000 mg/kg. Data considered includes Sodium Dichloroisocyanurate Dihydrate >5000 g/kg (rabbit).  
**Inhaled:** Using LD<sub>50</sub>'s for ingredients, the calculated LC<sub>50</sub> (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 of > 0.1% is considered a sensitiser.  
**Mutagenicity:** No ingredient present at concentrations of > 0.1% is considered a mutagen.  
**Carcinogenicity:** No ingredient present at concentrations of > 0.1% is considered a carcinogen.  
**Reproductive/Developmental:** No ingredient present at concentrations of > 0.1% is considered a reproductive or developmental toxicant or to have any effects on or via lactation.

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**Systemic:** No ingredient present at concentrations of > 0.1% is considered a target organ toxicant.

**Aggravation of existing conditions:** None known.

**SECTION 12: ECOLOGICAL INFORMATION**

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

**Aquatic:** Using EC<sub>50</sub>'s for ingredients, the calculated EC<sub>50</sub> for the mixture is <1 mg/L. Data considered includes: Sodium Dichloroisocyanurate, Dihydrate 0.25 mg/L (96hr, Rainbow trout), 0.28 mg/L (48hr Daphnia magna).

**Bioaccumulation:** Not readily biodegradable.

**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<sub>50</sub>'s for ingredients, the calculated LD<sub>50</sub> (oral, rat) for the mixture is between 500 and 2,000 mg/kg. Data considered includes: Sodium Dichloroisocyanurate Dihydrate 500-1600 mg/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.

**SECTION 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 into the environment.

**Contaminated Packaging:** Rinse containers with water before disposal. Preferably re-cycle container, otherwise send to landfill.

**SECTION 14: TRANSPORT INFORMATION**

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

**UN Number:** 3077.

**Class:** 9.

**Precaution:** Ecotoxic.

**Proper Shipping name:** Environmentally Hazardous Substance, Solid, N.O.S., Sodium Dichloro-s-triazinetriene Dihydrate.

**Packing group:** III.

**Hazchem Code:** 3Z.

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**IMDG**

**Number:** 3077.  
**Class:** 9.  
**Precaution:** Marine Pollutant.  
**Proper Shipping name:** Environmentally Hazardous Substance, Solid, N.O.S., Sodium Dichlo-s-triazinetriene Dihydrate.  
**Packing group:** III.  
**EmS:** F-A, S-F.

**IATA**

**UN Number:** 3077.  
**Class:** 9.  
**Precaution:** Ecotoxic.  
**Proper Shipping name:** Environmentally Hazardous Substance, Solid, N.O.S., Sodium Dichlo-s-triazinetriene Dihydrate.  
**Packing group:** III.

**SECTION 15: REGULATORY INFORMATION**

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO) Approval number: HSR003823 Sodium Dichloroisocyanurate, Dihydrate.

**Key workplace requirements:**

**SDS Availability:** To be available within 10 minutes in workplaces storing > any quantity.  
**Labelling:** No removal of lables and/or decanting of product into other containers can occur.  
**Emergency Plan:** Required if >100 kg is stored.  
**Approved Handler:** Not Required.  
**Tracking:** Not Required.  
**Bunding and secondary Containment:** Required if >100 kg is stored.  
**Signage:** Required if >100 kg is stored in any one location.  
**Location Test certificate:** Not Required.  
**Flammable zone:** Not Required.  
**Fire extinguisher:** Not Required.

The above workplace requirements apply if only this particular substance is present. The complete set of controls for this 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, along with Regulations, Local Council Rules and Regional Council plans.

**SECTION 16: OTHER INFORMATION**

**Approval Code:** Approval. HSR 003823 Sodium Dichloroisocyanurate, Dihydrate.  
**Controls:** EPA. [www.epa.govt.nz](http://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.

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<b>Controls Matrix:</b>	List of default controls linking regulation number to Matrix code (e.g. T1, I16).
<b>EC<sub>50</sub> :</b>	Eco-toxic concentration 50% - concentration in water which is fatal to 50% of a test population. (e.g. daphnia, fish species).
<b>ERMA:</b>	Environmental Risk Management Authority (Now EPA).
<b>EPA:</b>	Environmental Protection Agency (previously ERMA).
<b>HAZCHEM Code:</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters.
<b>HSNO:</b>	Hazardous Substances and New Organisms. (Act and Regulations).
<b>IARC:</b>	International Agency of Research on Cancer.
<b>LEL:</b>	Lower Explosive Limit.
<b>LD<sub>50</sub> :</b>	Lethal Doses 50% - concentration which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub> :</b>	Lethal concentration 50% - concentration in air which is fatal to 50% of a test population (usually rats).
<b>MSDS:</b>	Material Safety Data Sheets.
<b>OSH – (DoL):</b>	The Occupational Safety and Health Service of the Department of Labour (NZ).
<b>STEL:</b>	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.
<b>TWA:</b>	Time Weighted Average – generally referred to WES averaged over a typical work day (usually 8 hours).
<b>UEL:</b>	Upper Explosive Limit.
<b>U&amp;N Number:</b>	United Nations Number.
<b>WES:</b>	Workplace Exposure Standard – The airborne concentration of a biological or chemical agent to which a worker may be exposed.
<b>References:</b>	
<b>Data:</b>	Unless otherwise stated comes from the EPA/HSNO chemical classification information database (CCID) <a href="http://www.epa.govt.nz/compliance/chemicals.html">http://www.epa.govt.nz/compliance/chemicals.html</a> for specific chemicals.
<b>EPA Transfer Gazettes:</b>	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004).
<b>Controls Matrix:</b>	Part of the EPA New Zealand User Guide to the HSNO Controls Regulations.
<b>WES 2013:</b>	The NZ Workplace Exposure Standards Effective from 2013, published by Worksafe NZ and available on their website – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a>
<b>Other References:</b>	Suppliers SDS (China), GESTIS (Germany).

**Disclaimer**

The modifications to this Safety Data Sheet made by M J Nankivell HazTec Ltd have been restricted to adding New Zealand specific information only as required under the HSNO Act 1996 and associated regulations and no changes have been made to the technical content.

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