Material Safety Data Sheet

BALLAST WATER DISINFECTANT SDIC (RXSOL-31-3114-025)

1. Product and Company Identifaction

Product Name	DI CHLOR SDIC
Part Number	RXSOL-31-3114-025

Chemical Name	Sodium dichloroisocyanurate dehydrate
Synonyms	Sodium dichlor;; Sodium dichloroisocyanurate dihydrate: Sodium Dichloro-S-Triazinetrione Dihydrate; Troclosene sodium

Company Details:
RX MARINE INTERNATIONAL
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2. Composition / informationon ingredients

Name of Substance	Cas Number	EC Number	Wight %
Sodium dichloroisocyanurate dehydrate	51580-86-0	220-767-7	99-100%
Sodium chloride	7647-14-5	231-593-8	0-1%

3. Hazards Identification

Signal Word	Warning
Classification of the chemical:	Oxidising solids - Category 2 Acute Oral Toxicity - Category 4 Eye Irritation - Category 2A Specific target organ toxicity (single exposure) - Category 3 The following health/environmental hazard categories fall outside the scope of the Workplace Health and Safety Regulations: Acute Aquatic Toxicity - Category 1 Chronic Aquatic Toxicity - Category 1
Hazard Statements	H272 May intensify fire; oxidizer. H302 Harmful if swallowed. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H410 Very toxic to aquatic life with long lasting effects
Precautionary statements prevention	P210 Keep away from heat. No smoking. P220 Keep and store away from clothing, incompatible materials, combustible materials. P221 Take any precaution to avoid mixing with combustibles / incompatible materials. P261 Avoid breathing dust / fume / gas / mist / vapours / spray. P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves / protective clothing / eye protection / face protection. P285 In case of inadequate ventilation wear respiratory protection. P273 Avoid release to the environment..

Precautionary statements response	P370 In case of fire: P378 Use water spray (large quantities) to extinguish. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P391 Collect spillage.

4. First Aid Measures

Eye Contact	Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.
Skin Contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Get medical attention immediately.
Inhalation:	In case of inhalation, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
Ingestion:	If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.
Notes to Physician	Treat symptomatically. Delayed effects from exposure to chlorine (decomposition product) can include shortness of breath, severe headache, pulmonary oedema and pneumonia.

5. Fire-fighting Measures

Suitable Extinguishing Media	Water spray (large quantities).
Unsuitable Extinguishing Media	DO NOT USE the following as extinguishing media: Dry agent (carbon dioxide, dry chemical powder).
Unusual Fire and Explosion Hazards	When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, chlorine and CO.
Fire Fighting Procedure:	Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished.
Protective Equipment	Use personal protective equipment.

6. Accidental Release Measures

Spillage	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...).
Personal Protection	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.
Enviromental Precaution	Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.
Methods for cleaning	Wipe up the spilled product and collect it in a suitable container for disposal. Always control the contaminated product on active chlorine .

7. Handling and Storage

Handling	Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, metals
Storage	Strong Oxidizer. Moisture Sensitive. Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers. Do not store above 23°C (73.4°F).
Advice on general occupational hygiene	Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.

8. Exposure controls and personal protection

Engineering Control	Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially inconfined areas. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.
Personal Protection	Eye/face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure. Respiratory Protection : Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator exposure limits are exceeded or if irritation or other symptoms are experienced.
Other Protection Measure	Handle in accordance with good industrial hygiene and safety practice.
Exposure Limit	This product does not contain any components that have regulatory occupational exposure limits (OELs) established.



Gloves



Suit

9. Physical and chemical properties

Form	Solid, Granular
Colour	White
Odour	Slight Chlrine
Odor Threshold	Not Applicable
pH	6 -7
Melting Point	245 °C (decomposition)
Boiling Point	Not Applicable
Flash Point	Not Applicable
Evaporation Rate	Not Applicable
Flammability (solid, gas)	No Data Available
Explosive limits	No Data Available
Vapour pressure	No Data Available
Vapour Density	No Data Available
Specific Gravity	1.95 g/cm3 at 20 °C
Partition coefficient	No data available
Explosive properties	None
Solubility	Soluble in water 30 g/l at 20 °C
Molecular Formula	$C3Cl2N3NaO3 \cdot 2H2O$
Molecular Weight	256 g/mol

10. Stability and reactivity

Reactivity	Yes.
Stability	Oxidizer: Contact with combustible/organic material may cause fire, Moisture sensitive, Risk of explosion by shock, friction, fire or other sources of ignition.
Possibility of hazardous reactions	Do not get water inside container. Wet material may generate nitrogen trichloride, anexplosion hazard. Avoid contact with easily oxidizable organic material. Contact with acids liberates toxic gas. Hazardous polymerization will not occur.
Conditions to avoid	Incompatible products. Excess heat. Combustible material. Avoid dust formation. Exposure to moist air or water. Ignitions sources - heat, sparks and open flames. Do not subject to grinding/shock/friction. Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong bases. Acids.
Hazardous Polymerization	Carbon monoxide (CO). Carbon dioxide (CO2). Nitrogen oxides (NOx).

11. Toxicological information

Rout Of Entry	Inhalation. Ingestion.
Toxicity to Animal	Acute toxicity : -Rat, oral LD50 1671 mg/kg -Rat dermal LD50 >5000 mg/kg
Eye irritation	Severe irritant
Dermal irritation	Severe irritant
Mutagenicity	Not mutagenic in five salmonella strains with or without metabolic activation.
Carcinogenity	Not classified by IARC, OSHA, EPA Not included in NTP11 Report on Carcinogens
Reproductive toxicity	Sodium dichloroisocyanurate acid when given orally to pregnant mice from day 6 to day 15 of gestation, did not induce any significant teratogenic effects.
Chronic toxicity	Chronic inhalation exposure may cause impairment of lung function and permanent lung damage. In the experiment with drinking water from 28 days, extended to 59 days (rat: NOAEL = 115 mg/kg lich.day)

12. Ecological information

Eco Toxicity	The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Fish Toxicity: LC50 Bluegill sunfish: 0.25-1.0 mg/L (96 hour) LC50 Rainbow trout: 0.13-0.36 mg/L (96 hour) LC50 Inland silversides: 1.21 mg/L (96 hour) Invertebrate Toxicity: LC50 Water flea: 0.196 mg/L (48 hour) LC50 Mysid shrimp: 1.65 mg/L (96 hour) Other Toxicity: LD50 Mallard duck (oral): 1,916 mg/kg LD50 N. Bobwhite Quail (oral): 1,732 mg/kg LD50 Mallard duck (diet): >10,000 ppm LD50 N. Bobwhite Quail (diet): >10,000 ppm
COD and BOD 5	Not Available
Products Biodegradation:	This material is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.
Mobility in soil	No Information available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects	Henry constant : Transition from water solution into the atmosphere is not to be expected.

13. Disposal considerations

Waste treatment Method	Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. Use or reuse if possible. This material is a registered pesticide. May be subject to disposal regulations.

14. Transport information

DOT

UN Number	UN3307
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (troclosene sodium, dihydrate)
Hazard Class	9
Packing group	III
Environmental hazards	

TDG

UN Number	UN3307
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (troclosene sodium, dihydrate)
Hazard Class	9
Packing group	III

IATA

UN Number	UN3307
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (troclosene sodium, dihydrate)
Hazard Class	9
Packing group	III

MDG/IMO

UN Number	UN3307
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (troclosene sodium, dihydrate)
Hazard Class	9
Packing group	III
IMDG Marine pollutant	yes

Further information	EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. Regulatory information

Safety,health and environmental regulations	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
National legislation	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. P8 OXIDISING LIQUIDS AND SOLIDS E1 ENVIRONMENTAL HAZARDS

Other regulations	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. Other information

Other Information	The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and weassume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages. DISCLAIMER OF LIABILITY :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.