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## SAFETY DATA SHEET

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

- Product Name: Sodium Dichloroisocyanurate Dihydrate Granules/Tablets
- Product Part Number: 001
- Chemical Name: Troclosene sodium, dihydrate
- Synonyms: Sodium Dichloroisocyanurate Dihydrate
- CAS Number: 51580-86-0
- EC Number: 220-767-7
- Index No.: 613-030-01-7

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

- Use of the substance/mixture: Pool / spa treatment; Biocide
- Use advised against: No information available

#### 1.3 Emergency telephone number

- Emergency Telephone: 0800 043 0892 (emergency)

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

- Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; EUH031
- Additional information: For full text of Hazard and EU Hazard statements: see section 16

#### 2.2 Label elements



GHS07



GHS09

- Signal Word: Warning
- Symbols: GHS07; GHS09

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**SECTION 2: Hazards identification (....)**

- Hazard statements
  - 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
  - P102 - Keep out of reach of children.
  - P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
  - P271 - Use only outdoors or in a well-ventilated area.
  - 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.
  - P501 - Dispose of contents/container to an authorised waste collection point
- Supplemental Hazard Information (EU)
  - EUH031: Contact with acids liberates toxic gas.

**2.3 Other hazards**

- Marine pollutant
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**SECTION 3: Composition/information on ingredients****3.1 Substances**

- troclosene sodium, dihydrate
  - Concentration: 100%
  - EC Number: 220-767-7
  - CAS Number: 51580-86-0
  - Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; EUH031

**3.2 Mixtures**

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**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Contact with skin
  - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water
  - Contaminated clothing should be laundered before reuse
  - If skin irritation or rash occurs: Get medical advice/attention.
- Contact with eyes
  - If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes
  - Irrigate eyes thoroughly whilst lifting eyelids
  - Remove contact lenses, if present and easy to do. Continue rinsing.
  - Get immediate medical advice/attention.
- Ingestion
  - Rinse mouth with water (do not swallow)
  - Give 200-300mls (half pint) water to drink

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## **SECTION 4: First aid measures (....)**

Never give anything by mouth to an unconscious person  
Do not induce vomiting unless directed by medical personnel.  
If vomiting occurs turn patient on side  
Get immediate medical advice/attention.

- Inhalation  
Remove person to fresh air and keep comfortable for breathing.  
If breathing is difficult, oxygen should be given by a trained person  
Get medical advice/attention.

### **4.2 Most important symptoms and effects, both acute and delayed**

- Contact with eyes  
Causes redness and irritation
- Contact with skin  
May cause redness and irritation
- Ingestion  
May cause nausea/vomiting
- Inhalation  
Causes severe irritation  
May cause breathing difficulty

### **4.3 Indication of any immediate medical attention and special treatment needed**

- Treat symptomatically
- 

## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

- In case of fire: use water or foam to extinguish.
- DO NOT USE dry extinguishers containing ammonium compounds such as dry powder.

### **5.2 Special hazards arising from the substance or mixture**

- Gives off irritating or toxic fumes (or gases) in a fire.
- Decomposition products may include chlorine
- Decomposition products may include hydrogen chloride
- Decomposition products may include nitrogen oxides

### **5.3 Advice for firefighters**

- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.
  - Shut off all ignition sources
  - Keep container(s) exposed to fire cool, by spraying with water
  - Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.
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## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

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**SECTION 6: Accidental release measures (....)**

- Personal precautions for non-emergency personnel: Wear protective clothing as per section 8; Shut off all ignition sources; Avoid formation of dust; Avoid contact with skin and eyes; Do not breathe dust/fume/gas/mist/vapours/spray.; Eyewash bottles should be available; Wash thoroughly after handling; Evacuate the area and keep personnel upwind
- Personal precautions for emergency responders: Wear chemical protection suit; Wear self-contained breathing apparatus (SCBA).

**6.2 Environmental precautions**

- Avoid release to the environment.
- Do not allow to enter public sewers and watercourses
- If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities

**6.3 Methods and material for containment and cleaning up**

- Do not mix with water
- Granules
  - Sweep or shovel-up spillage and remove to a safe place
  - Place in appropriate container
  - Seal containers and label them
  - Do not absorb spillage in sawdust or other combustible material
  - Avoid formation of dust
- Tablets
  - If tablets are dry and uncontaminated: collect up into heavy duty plastic bag: where possible and suitable, use material as originally intended. Wash away any residues with plenty of water. If tablets are contaminated: they should be transferred to waste ground, spread thinly and covered with a thin layer of earth: a smell of chlorine will be noted until the material has degraded. Keep people, vehicles and animals away from the disposal area. If tablets become damp: they may decompose to give off chlorine fumes: transfer spillage to unsealed plastic bags avoiding any large masses of material within the bags and remove to waste ground for immediate treatment/disposal as above: avoid breathing fumes. Wash away residues with copious amounts of water. If the spillage of tablets is large: (more than 100kg) place into bins lined with polythene bags and eliminate in accordance with locally valid disposal regulations
  - To be disposed of as hazardous waste

**6.4 Reference to other sections**

- See Section 8 and 13

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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

- Ensure adequate ventilation
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Do not get in eyes, on skin, or on clothing.
- Do not eat, drink or smoke when using this product.
- Do not add water to the product, always add the product to large quantities of water.
- Eyewash bottles should be available
- Wash thoroughly after handling.
- Contaminated work clothing should not be allowed out of the workplace.
- Contaminated clothing should be laundered before reuse

**7.2 Conditions for safe storage, including any incompatibilities**

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**SECTION 7: Handling and storage (....)**

- Keep in a cool, dry, well ventilated place
- Protect from moisture
- Substance is hygroscopic
- Keep away from food, drink and animal feedingstuffs
- Keep away from acid
- Keep container tightly closed
- Keep away from heat and sources of ignition

**7.3 Specific end use(s)**

- Pool / spa treatment
  - Biocide
- 

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

- WEL (short term): 0.5 ppm (As chlorine)
- WEL (short term): 1.5 mg/m<sup>3</sup> (As chlorine)
- DNEL (inhalational) 8.11 mg/m<sup>3</sup> Industry, Long Term, Systemic Effects
- DNEL (dermal) 2.3 mg/kg (bw/day) Industry, Long Term, Systemic Effects
- DNEL (inhalational) 1.99 mg/m<sup>3</sup> Consumer, Long Term, Systemic Effects
- DNEL (dermal) 1.15 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
- PNEC aqua (freshwater) 0.17 ug/l
- PNEC aqua (marine water) 1.52 mg/l
- PNEC aqua (intermittent releases) (freshwater) 1.7 ug/l
- PNEC (STP) 590 ug/l
- PNEC sediment (freshwater) 7.56 mg/kg
- PNEC terrestrial (soil) 756 ug/kg

**8.2 Exposure controls**

- Do not eat, drink or smoke when using this product.
- Engineering controls should be provided which maintain airborne concentrations as low as practicable
- In case of insufficient ventilation, wear suitable respiratory equipment
- Wear suitable protective clothing, including eye/face protection and gloves (neoprene or nitrile are recommended)
- The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.
- The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.
- Glove material: nitrile rubber  
Thickness: 0.11 mm  
Breakthrough time: 480 minutes  
Reference: Manufacturer
- Wear safety glasses approved to standard EN 166.
- When handling this substance, e.g. sampling, wear goggles giving complete eye protection
- Ensure eyewash stations and safety showers are close to hand.



Goggles



Gloves



Respirator



Suit



Boots



No Flames



No Smoking

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**SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

- Appearance: Solid; white; tablets; granules
- Odour: Smells of chlorine
- Odour threshold: No information available
- pH: No information available
- Melting point/freezing point: No information available
- Initial boiling point and boiling range: No information available
- Flashpoint: No information available
- Evaporation Rate: No information available
- Flammability (solid,gas): No information available
- Upper/lower flammability or explosive limits: No information available
- Vapour Pressure: 0.006 Pa @ 20°C
- Vapour Density: No information available
- Relative Density: 1.97
- Solubility(ies): 236.8 - 248.2 g/L @ 25 °C and pH 4.47
- Partition Coefficient (n-Octanol/Water): No information available
- Autoignition Temperature: No information available
- Decomposition temperature: 252 °C
- Viscosity: No information available
- Explosive Properties: May form explosive dust/air mixtures
- Oxidising Properties: Not oxidising

## 9.2 Other information

- Molecular formula: C<sub>3</sub>Cl<sub>2</sub>N<sub>3</sub>O<sub>3</sub>.Na<sub>2</sub>H<sub>2</sub>O
  - Molecular weight: 255.98
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**SECTION 10: Stability and reactivity**

## 10.1 Reactivity

- Stable under normal conditions

## 10.2 Chemical stability

- Considered stable under normal conditions
- No decomposition if stored normally.

## 10.3 Possibility of hazardous reactions

- Reacts with metals liberating hydrogen
- Contact with acids liberates toxic gas.

## 10.4 Conditions to avoid

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Avoid contact with moisture

## 10.5 Incompatible materials

- Incompatible with combustible material
- Do not allow product to come into contact with water or moisture
- Incompatible with acids and alkalis
- Incompatible with nitrogen compounds

## 10.6 Hazardous decomposition products

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**SECTION 10: Stability and reactivity (....)**

- Decomposition products may include toxic and irritant fumes
  - Decomposition products may include chlorine
  - Decomposition products may include hydrogen chloride
  - Decomposition products may include nitrogen oxides
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**SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

- Acute Toxicity
  - LD50 (oral, rat) (female) 1671 mg/kg bw
  - LD50 (oral, rat) (male) 2094 mg/kg bw
  - LD50 (dermal, rabbit) >5000 mg/kg bw
  - LC50 (inhalation, rat) 270 - 1 170 mg/m<sup>3</sup>/4h
  - Harmful if swallowed.
- Skin corrosion/irritation
  - Based on available data, the classification criteria are not met
- Serious eye damage/irritation
  - Causes serious eye irritation.
- Respiratory or skin sensitisation
  - Based on available data, the classification criteria are not met
- Germ cell mutagenicity
  - No evidence of mutagenic effects
- Carcinogenicity
  - No evidence of carcinogenic effects
- Reproductive toxicity
  - No evidence of reproductive effects
- Specific target organ toxicity (STOT) - single exposure
  - May cause respiratory irritation.
- Specific target organ toxicity (STOT) - repeated exposure
  - Based on available data, the classification criteria are not met
- Aspiration hazard
  - Based on available data, the classification criteria are not met
- Contact with eyes
  - Causes redness and irritation
  - May cause blurred vision
- Contact with skin
  - May cause redness and irritation
- Ingestion
  - The ingestion of significant quantities may cause damage to digestive system
  - The ingestion of significant quantities may cause nausea/vomiting
- Inhalation
  - May cause respiratory irritation
  - May cause breathing difficulty

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**SECTION 12: Ecological information****12.1 Toxicity**

- Very toxic to aquatic life with long lasting effects.
- LC50 (fish): 0.23 - 8 000 mg/l (96 hr)
- EC50 (aquatic invertebrates) 170 ug/l (48 hr)
- EC50 (aquatic algae) 100 mg/l (72 hr)

**12.2 Persistence and degradability**

- No information available

**12.3 Bioaccumulative potential**

- No information available

**12.4 Mobility in soil**

- Do not allow to penetrate the ground/soil.

**12.5 Results of PBT and vPvB assessment**

- No information available

**12.6 Other adverse effects**

- Do not empty into drains
- 

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

- This material and/or its container must be disposed of as hazardous waste
- Disposal should be in accordance with local, state or national legislation
- Do not discharge into drains or the environment, dispose to an authorised waste collection point
- Do not reuse empty containers without commercial cleaning or reconditioning

**13.2 Classification**

- Waste Codes in accordance with the European Waste catalogue (EWC) are origin-defined. Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with your waste disposal partner or the responsible authority.
  - The waste must be identified according to the List of Wastes (2000/532/EC)
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**SECTION 14: Transport information**

Dangerous Substance



ENVIRONMENTALLY HAZARDOUS

**14.1 UN number**

- UN No.: 3077

**14.2 UN proper shipping name**

- Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Sodium Dichloroisocyanurate Dihydrate)

**14.3 Transport hazard class(es)**

- Hazard Class: 9

**14.4 Packing group**



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**SECTION 14: Transport information (....)**

- Packing Group: III
- 14.5 Environmental hazards
  - Marine pollutant
- 14.6 Special precautions for user
  - No special precautions are required for this product
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
  - Not applicable
- 14.8 Road/Rail (ADR/RID)
  - ADR UN No.: 3077
  - Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Sodium Dichloroisocyanurate Dihydrate)
  - ADR Hazard Class: 9
  - ADR Packing Group: III
  - Tunnel Code: Not applicable
- 14.9 Sea (IMDG)
  - IMDG UN No.: 3077
  - Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Sodium Dichloroisocyanurate Dihydrate)
  - IMDG Hazard Class: 9
  - IMDG Pack Group.: III
- 14.10 Air (ICAO/IATA)
  - ICAO UN No.: 3077
  - Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Sodium Dichloroisocyanurate Dihydrate)
  - ICAO Hazard Class: 9
  - ICAO Packing Group: III

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**SECTION 15: Regulatory information**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - This Safety Data Sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 as amended by Regulation (EU) 2015/830
  - Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe
  - The Hazardous Waste (England and Wales) Regulations 2005 apply in the UK
  - This product is covered by EU Directive 2012/18/EU (the Seveso III Directive)
- 15.2 Chemical safety assessment
  - A REACH chemical safety assessment has not been carried out

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**SECTION 16: Other information**

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of our limited knowledge and belief, accurate, and reliable as of the date of authorisation of this safety data sheet. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to be satisfied as to the suitability and completeness of such information for the product as used.

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## **SECTION 16: Other information (....)**

Revision No. 2.1.0. Revised July 17.

Changes made: Updated to conform to latest version of REACH. Removal of Tunnel Code in Section 14

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

- H302: Harmful if swallowed
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation
- H400: Very toxic to aquatic life
- H410: Very toxic to aquatic life with long lasting effects
- EUH031: Contact with acids liberates toxic gas

--- end of safety datasheet ---

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