SAFETY DATA SHEET

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

1.1 Product identifier

- **UFI No:** **2300-D0AX-900W-2P9V**
- Product Name: Sodium Dichloroisocyanurate Dihydrate Granules
- Product Part Number: 001
- Chemical Name: Troclosene sodium, dihydrate Sodium
- Synonyms: 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 Details of the supplier of the safety data sheet

- Name of Supplier: Plastica Ltd
- Address of Supplier: Perimeter House
  Napier Road
  St Leonards-on-Sea
  East Sussex
  United Kingdom
  TN38 9NY
- Telephone: +44 (0) 1424 857857
- Email: info@plasticapools.net

1.4 Emergency telephone number

- Emergency Telephone: 0800 043 0891 (technical)
  0800 043 0892 (emergency)

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

- Signal Word: Warning
- Symbols: GHS07; GHS09

- 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.

SECTION 2: Hazards identification (....)

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

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical Name	Conc.	CAS No.	EC No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	SCL/ M-Factor/ ATE	REACH Registration Number	WEL/ OEL
Troclosene sodium, dihydrate	100%	51580-86-0	220-767-7	Acute Tox. 4, H302 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 EUH031	-	-	No

3.2 Mixtures

- Not applicable

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
  Get immediate 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 plenty of water to drink
  Do NOT induce vomiting.
  Get immediate medical advice/attention.

- Inhalation
  If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
  Apply artificial respiration only if patient is not breathing
  IF exposed or concerned: Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

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

- Contact with eyes
  Causes severe irritation
  Causes redness and swelling
- Contact with skin
  May cause redness and irritation
- Ingestion
  May cause nausea/vomiting
  May cause diarrhoea
  The ingestion of significant quantities may cause damage to digestive system
- Inhalation
  May cause respiratory irritation
  May cause coughing and tightness of chest

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media: Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions
- Unsuitable extinguishing media: High volume water jet; 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, hydrochloric acid, nitrogen oxides

5.3 Advice for firefighters

- Evacuate the area and keep personnel upwind
- 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.
- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Rescuers should take suitable precautions to avoid becoming casualties themselves
- Only trained and authorised personnel should carry out emergency response
- Personal precautions for non-emergency personnel: Ensure adequate ventilation; Do not breathe dust; Wear protective clothing as per section 8; Wash thoroughly after handling.
- Personal precautions for emergency responders: Evacuate the area and keep personnel upwind; Wear self-contained breathing apparatus (SCBA); Wear suitable protective clothing, eye/face protection and gloves

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

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

- Evacuate the area and keep personnel upwind
- Stop leak if safe to do so.
- Avoid formation of dust
- Do not mix with water
- Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal
- Seal containers and label them
- Seek expert advice for removal and disposal of all contaminated materials and wastes
- Flush spill area with copious amounts of water

6.4 Reference to other sections

- See section(s): 7, 8 & 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Use only in well ventilated areas
- Keep away from heat and sources of ignition
- Do not breathe dust
- Do not mix with other chemicals
- Do not add water to the product, always add the product to large quantities of water.
- Wear protective clothing as per section 8
- Contaminated clothing should be laundered before reuse
- Contaminated work clothing should not be allowed out of the workplace.
- Use good personal hygiene practices
- Do not eat, drink or smoke when using this product.
- Wash thoroughly after handling.
- Ensure eyewash stations and safety showers are nearby

7.2 Conditions for safe storage, including any incompatibilities

- Keep in a cool, dry, well ventilated place
- Keep container tightly closed
- Protect from moisture
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Keep away from food, drink and animal feedingstuffs
- Keep away from acid

7.3 Specific end use(s)

- Pool / spa treatment

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
  Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace exposure - Measurement of exposure by inhalation to chemical agents - Strategy for testing compliance with occupational exposure limit values). European Standard EN 14042 (Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents). European Standard EN 482 (Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- The UK HSE (EH40) recommends the following limits for dusts: 10 mg/m³ (8hr TWA) total inhalable dust; 4 mg/m³ (8hr TWA) total respirable dust

SECTION 8: Exposure controls/personal protection (....)

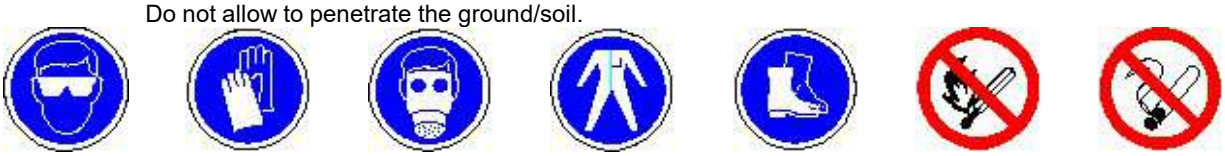
- Troclosene sodium, dihydrate
  (EU) OELV (short term limit value) (as chlorine) 0.5 ppm 1.5 mg/m³
  WEL (short term limit value) (as chlorine) 0.5 ppm 1.5 mg/m³ (UK)

  The following exposures are for troclosene sodium, CAS 2893-78-9

  DNEL (inhalational) 8.11 mg/m³ Industry, Long Term, Systemic Effects
  DNEL (dermal) 2.3 mg/kg (bw/day) Industry, Long Term, Systemic Effects
  DNEL (inhalational) 1.99 mg/m³ Consumer, Long Term, Systemic Effects
  DNEL (dermal) 1.15 mg/kg (bw/day) Consumer, Long Term, Systemic Effects
  PNEC aqua (freshwater) 170 ng/L
  PNEC aqua (intermittent releases, freshwater) 1.7 ug/L
  PNEC aqua (marine water) 1.52 mg/L
  PNEC (STP) 590 ug/L
  PNEC sediment (freshwater) 7.56 mg/kg
  PNEC terrestrial (soil) 756 ug/kg

8.2 Exposure controls

- Selection and use of personal protective equipment should be based on a risk assessment of exposure potential
- Engineering controls
  Engineering controls should be provided to prevent the need for ventilation
  Use local exhaust ventilation and/or enclosures.
- Respiratory protection
  No respiratory protection is needed if ventilation/extraction is adequate, otherwise wear approved dust mask
  Use type FFP2 (EN 143) dust masks
- Eye/face protection
  Wear goggles giving complete eye protection approved to standard EN 166.
- Skin protection
  Wear protective gloves. 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.
  Suitable glove material: Nitrile rubber.
  Thickness: 0.11 mm
  Breakthrough time: > 480 minutes.
  Wear suitable protective clothing
  Contaminated work clothing should not be allowed out of the workplace.
  Contaminated clothing should be laundered before reuse
- Hygiene measures
  Do not eat, drink or smoke when using this product.
  Use good personal hygiene practices
  Wash thoroughly after handling.
  Ensure eyewash stations and safety showers are nearby
- Environmental exposure controls
  Do not empty into drains
  Do not allow to penetrate the ground/soil.



SECTION 9: Physical and chemical properties

SECTION 9: Physical and chemical properties (....)

9.1 Information on basic physical and chemical properties

- Appearance: Solid; white
- Odour: Smells of chlorine
- Odour threshold: 1 - 3 ppm (value for chlorine)
- 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: Not applicable
- Vapour Pressure: < 0.006 Pa @ 20 °C
- Vapour Density: No information available
- Relative Density: 1.97
- Solubility(ies): 248.2 g/L (pH 4.47)
- Partition Coefficient (n-Octanol/Water): No information available
- Autoignition Temperature No information available
- Decomposition temperature: 252 °C
- Viscosity: Not applicable
- Explosive Properties: Non-explosive
- Oxidising Properties: Not oxidising

9.2 Other information

- Molecular weight: 255.98

SECTION 10: Stability and reactivity

10.1 Reactivity

- Warning! Do not use with other products. May release dangerous gases (chlorine)

10.2 Chemical stability

- Considered stable under normal conditions

10.3 Possibility of hazardous reactions

- Contact with acids liberates toxic gas.

10.4 Conditions to avoid

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

10.5 Incompatible materials

- Incompatible with acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds

10.6 Hazardous decomposition products

- Decomposition products may include chlorine, hydrochloric acid, nitrogen oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Harmful if swallowed.

SECTION 11: Toxicological information (....)

Substances

Chemical Name	LD_{50} (oral, rat)	LC_{50} (inhalation, rat)	LD_{50} (dermal, rabbit)
Troclosene sodium, dihydrate	1 671 mg/kg	0.27 - 1.17 mg/L (4 h)	> 5 000 mg/kg

- 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
  Causes redness and swelling
- Contact with skin
  May cause redness and irritation
- Ingestion
  May cause nausea/vomiting
  May cause diarrhoea
  The ingestion of significant quantities may cause damage to digestive system
- Inhalation
  May cause respiratory tract irritation.
  May cause shortness of breath
  May cause coughing

SECTION 12: Ecological information

12.1 Toxicity

- Very toxic to aquatic life with long lasting effects.
- Troclosene sodium, dihydrate
  LC_{50} (fish) 0.23 - 0.355 mg/L (4 days)
  EC_{50} (aquatic invertebrates) 0.17 - 0.28 mg/L (48 h)
  LC_{50} (aquatic algae, daphnia) 0.196 mg/L (48 h)

12.2 Persistence and degradability

SECTION 12: Ecological information (....)

- This substance is not readily biodegradable

12.3 Bioaccumulative potential

- No information available

12.4 Mobility in soil

- Large volumes may penetrate soil and contaminate groundwater

12.5 Results of PBT and vPvB assessment

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII

12.6 Other adverse effects

- Do not empty into drains

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- 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

- The waste must be identified according to the List of Wastes (2000/532/EC)
- Hazardous Property Code(s): HP 4 Irritant; HP 5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity; HP 6 Acute Toxicity; HP 14 Ecotoxic

SECTION 14: Transport information

UN 3077 and UN 3082, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5L/kg or less, are not subject to the provisions of ADR, RID, IMDG or IATA, provided the package meets the general packing quality provisions.

14.1 UN number or ID 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

- Packing Group: III

14.5 Environmental hazards

- Marine pollutant

14.6 Special precautions for user

- No information available

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

SECTION 14: Transport information (....)

- 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: (-)

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

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
- Troclosene sodium dihydrate is listed in Annex III of REACH as # Suspected acutely toxic via the oral route: The Danish QSAR database contains information indicating that the substance is predicted as toxic via the oral route. # Harmonised classification for acute toxicity: The substance has the following harmonised classification in Annex VI of CLP: Acute Tox. 4 # Harmonised classification for aquatic toxicity: The substance has the following harmonised classification in Annex VI of CLP: Aquatic Acute 1; The substance has the following harmonised classification in Annex VI of CLP: Aquatic Chronic 1 # Harmonised classification for eye irritation: The substance has the following harmonised classification in Annex VI of CLP: Eye Irrit. 2 # Harmonised classification for specific target organ toxicity: The substance has the following harmonised classification in Annex VI of CLP: STOT SE 3 # Suspected hazardous to the aquatic environment: The Danish QSAR database contains information indicating that the substance has a 96h LC50 to fish of <1 mg/L; The Danish QSAR database contains information indicating that the substance has a 48h EC50 to Daphnia of <1 mg/L # Suspected persistent in the environment: The Danish QSAR database contains information indicating that the substance is predicted as non readily biodegradable # Suspected skin irritant: The Danish QSAR database contains information indicating that the substance is predicted as skin irritant
- This product is covered by the EU Biocides Regulation 528/2012 (EU BPR)
- This product is covered by EU Directive 2012/18/EU (the Seveso III Directive)
- UN 3077 and UN 3082, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5L/kg or less, are not subject to the provisions of ADR, RID, IMDG or IATA, provided the package meets the general packing quality provisions.

15.2 Chemical safety assessment

- A REACH chemical safety assessment has not been carried out

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 PLASTICA'S 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.

Sources of data: Information from published literature and supplier safety data sheets

Revision No. 2.0.0. Revised October 2017.
Changes made: Updated to conform to latest version of REACH

Revision No. 3.0.0. Revised December 2020.
Changes made: Minor revisions to all sections

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

Acronyms

- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstracts Service
- DNEL: Derived No-Effect Level
- EC: European Community
- EC_{50}: Effective Concentration, 50%
- GHS: Globally Harmonised System
- LC_{50}: Lethal Concentration, 50%
- LD_{50}: Lethal Dose, 50%
- NOAEC: No observed adverse effect concentration
- NOAEL: No observed adverse effect level
- NOEC: No observed effect concentration
- OEL: Occupational Exposure Limit
- PBT: Persistent, Bioaccumulative and Toxic
- PNEC: Predicted No-Effect Concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- SCL: Specific Concentration Limit
- vPvB: very Persistent and very Bioaccumulative
- WEL: Workplace Exposure Limit

--- end of safety datasheet ---