

SAFETY DATA SHEET – DS091
Proton Chlorine Tablets

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Identification of the substance/preparation:

Product Name: Chlorine Tablets (weight range 05g – 1.0g)
Product Number/s: PN496
Synonyms: None

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

Identified Uses: Proton Chlorine Tablets (NaDCC) are used for disinfection applications for Font Nozzles, Sparklers, Creamers and Fixed Nozzles.
Uses advised against: Not known.

1.3 Details of the supplier of the Safety Data Sheet

Supplier: Maclin Sourcing Solutions Ltd (Trading as Hygiene4less and Maclin Group),
Unit A3, Risby Business Park,
Newmarket Rd., Risby, Suffolk, IP28 6RD, United Kingdom
Telephone: +44 (0) 1284 810 887
E Mail: info@maclingroup.co.uk

1.4 Emergency telephone number

Telephone: + 44 (0) 1284 810 887 (08.00 – 17.00 Mon-Fri)
Nations Poisons Information Service (NPIS) UK; 0344 892 0111
Nations Poisons Information Service (NPIS) IRELAND: 01 8092 166

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to regulation (EC) No. 1272/2008 (CLP/GHS):

Eye Irritant: Category 2 – causes serious eye irritation
Specific Target Organ Toxicity (STOT) single exposure: Category 3 – May cause respiratory tract irritation
Hazardous to Aquatic Environment – Acute Hazard: Category 1 – Very toxic to aquatic life (H400)
Hazardous to Aquatic Environment – Chronic Hazard: Category 1 – Very toxic to aquatic life with long -
lasting effects (H410)

Additional Information: EUH031 – Contact with acids liberates toxic gas

Harmful: On contact with moisture, NaDCC readily decomposes to Chlorine, Hypochlorous Acid & Cyanuric Acid

2.2 Label Elements:

Labelling in accordance with (EC) No. 1272/2008 (CLP/GHS):



Signal Word: WARNING

Hazard Statement(s)

H319 – Causes serious eye irritation

H335 – May cause respiratory irritation

Additional Hazard Statement(s)

EUH031 – Contact with acids liberates toxic gas

Environmental Health Hazard Statement(s)

H410 – Very toxic to aquatic life with long lasting effects

Prevention Statement(s)

P261 – Avoid breathing dust/fumes

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

P264 – Wash hands thoroughly after handling

Precautionary Statement(s)

P101 – If medical advice is needed, have product container or label at hand

Response Statement(s)

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

P312 – Call a POISON CENTRE or doctor if you feel unwell

P391 – Collect Spillage

Storage Statement(s)

P403 + P233 + P102 Store in a well-ventilated place. Keep container tightly closed. Keep out of reach of children.

Disposal Statement(s)

P501 – Dispose of contents and container in accordance with applicable local regulations

2.3 Other Hazard Information

Short-Term Exposure (Acute):

PBT: The substances contained in this preparation are not identified as Persistently Bio-accumulative or Toxic (PBT) substances

Endocrine disruptors: The product does not contain any ingredient identified as having endocrine disrupting properties according to Delegated Regulation (EU) 2017/2100 or Regulation (EU) 2018/605.

Contains Sodium dichloroisocyanurate (or Troclosene sodium) - must be stated on the label

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

This product is a mixture.

3.2 Mixtures

Ingredient / CAS / Synonyms	Weight in Product (% w/w)	EC (EINECS) No./ Reach / C&L Index No.	EU Classification	CLP Classification
Troclosene sodium CAS No. 2893-78-9 <u>Chemical Name:</u> 1,3,5 - Triazine -2,4,6 (1H,3H,5H) Trione 1,3, - Dichloro, Sodium Salt <u>Synonyms:</u> Sodium Dichloro -1,3,5 - Triazinetrione Anhydrous. Sodium Dichloro - S - Triazine -2,4,6 1H,3H,5H)-Trione. Troclosene Sodium. <u>Chemical Family:</u> Chlorinated S Triazine Trione <u>Formula:</u> $\text{3Cl}_2\text{N}_3\text{O}_3\text{Na}$	5-40% w/w	220-767-7 UK REACH: C&L Index No. 613-030-01-7	O; X _n ; N R8, R22, R31, R36/37, R50/53	Oxidising Solid – Category 2: Eyes irritant Cat.2; Harmful if swallowed Cat. 4; May cause respiratory tract irritation Cat.3; Very toxic to aquatic life Cat. 1; H302; H329; H335; H272; H410; EUH031 – do not mix with acids
Adipic Acid CAS No. 124-04-9 1,6- Hexanedioic Acid - Range <u>Chemical Family:</u> Saturated Dicarboxylic Acid <u>Synonyms:</u> 1,4 - Butanedicarboxylic Acid Adipinic Acid <u>Formula:</u> $\text{COOH (CH}_2)_4\text{COOH}$	20-45% w/w	204-673-3 UK REACH: C&L Index No. 607-144-00-9	Xi, R36	Eyes irritant Cat.2; H319

Important Note: the classification descriptions given in this section relate to the components in their pure form. For mixture classifications, see 2.2 Label elements. (above). For further information, see sections 15 and 16

3.3 There are no other hazardous materials in this formulation that are known to the supplier.

4. FIRST AID MEASURES:

4.1 Description of first aid measures

- Eye Contact: Immediately flush with a clean potable (tap) or isotonic water for at least 5 minutes. Make sure to flush under upper and lower eyelids. Remove contact lenses, if present. If irritation persists, seek medical attention and continue to flush whilst waiting.
- Skin Contact: Remove contaminated clothing immediately. Promptly wash skin thoroughly with potable (tap) water. Wash any contaminated clothing well before re-use. If irritation persists, seek medical attention and continue to flush whilst waiting.
- Ingestion: Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large quantities of water. (If available give several glasses of milk). If vomiting occurs spontaneously, keep airway clear and give more water. If irritation persists, seek medical attention.
- Inhalation: Move person to fresh air. If breathing is difficult have a trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. If symptoms persist, seek medical attention.

Note to Physician: Possible mucosal damage may contraindicate the use of gastric irrigation.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptoms as they occur

Contact with acids (urine etc.) liberates chlorine gas – toxic if inhaled.

Dilution of the product with copious amounts of potable (tap) water will reduce its hazardous properties.

Retain product label or have Product Data Sheet available for physician.

5. FIRE FIGHTING MEASURES

5.1 Special Fire or Explosion Hazards

Negligible fire hazard. Product is not flammable itself but contact with combustible material may cause fire. Product combustible if dehydrated by drying. Decomposes above 240-250°C with release of chlorine & other toxic fumes but no visible flame.

A thermal decomposition can be extinguished by flooding with copious amounts of water or by isolating the decomposing material in open air and allowing it to be consumed. Use self-contained breathing apparatus and goggles. Do not approach from leeward.

5.2 Suitable Extinguishing Media

Use water fire or foam extinguisher if available or water spray.

DO NOT USE dry fire extinguishers containing ammonium compounds, carbon dioxide or halogenated extinguishers, as potential for violent reaction. Wear breathing apparatus.

5.3 Other Recommendations

Remove the product if it is safe to do so, before using water for fire fighting in order to minimise hazards from release of toxic fumes. It will often be safer to let the fire burn itself out. Where it is decided to fight the fire with water, large quantities **must** be used. If insufficient water is used there may be an explosion hazard associated with hot damp material.

6. ACCIDENTAL RELEASE MEASURES

Refer to section 8 for personal protection when handling spillages.

6.1 Personal Precautions:

Avoid contact with skin and eyes. Avoid inhalation of dust. Use in a well-ventilated area. Wear appropriate PPE (Gloves, goggles etc.).

6.2 Environmental Precautions:

Do not release large volumes into the environment. Prevent flow of material into water courses. Report large spills (over 100kgs) to Environment Agency or local Water Authorities. Dilute spill with large volumes of potable (tap) water where possible.

Small spillages should be cleaned up as soon as possible to prevent contamination with foreign materials with which it may react - see section 10, stability and reactivity. Flush away with plenty of water.

Handle spillage carefully, do not return spilled material to original container. **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 copious amounts of water.

If large volumes of tablets (over 100 kgs) are contaminated they should be contained with (for example) sand, or earth/soil or other suitable non-combustible material. Gather up and store in suitable waste disposal containers before disposal.

If tablets become damp they will effervesce, evolving carbon dioxide and 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.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Wear appropriate PPE (Gloves, goggles etc.).

Avoid contact with skin and eyes. Avoid inhalation of dust. Do not mix with acids (Urine etc.). Use in a well-ventilated space.

7.2 Recommended Storage Conditions

STORE IN A COOL, DRY, WELL-VENTILATED PLACE WITH CONTAINER LID OR POUCH SEAL TIGHTLY CLOSED.

Store away from all incompatibles and combustibles (see section 10). Moisture and Water sensitive – do not allow moisture or water to get into the container Avoid high humidity levels. Keep away from fire, heat, flame & direct sunlight. Keep out of reach of children. Never store damp or contaminated material. Ideally store below 25°C.

7.3 Usage:

See Product Label and Product Data Sheet for specific end use is.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameter

Chlorine (CAS: 7782-50-5) EU Limit values.		
Exposure:	Route:	Measure:
Short term - Inhalable dust	Respiratory	15 min STEL ^{*2} – 1.5mg/m ³ 8 Hour TWA ^{*1} – 10mg/m ³
Long term – Systemic effects - Workers	Dermal	2.3mg/Kg/day
Long term – Systemic effects - Workers	Inhalation	8.11mg/Kg/day

Adipic Acid		
Exposure:	Route:	Measure:
Long-term – systemic worker	Inhalation	74.19mg/m ³ DNEL ^{*3}
Long term – Systemic effects - Workers	Dermal	21mg/Kg/day DNEL ^{*3}

*1 Time weighted average. *2 Short term exposure limit *3 Derived no-effect level

8.2 Exposure Controls

General recommendations:

Smoking, Food or Drink should not be consumed in the vicinity

These are no specific exposure scenarios implemented for this product.

8.3 Respiratory Protection:

Where any dust in the breathing zone cannot be controlled with ventilation, wear an officially approved respirator for protection (EN 140 chlorine) against airborne dust.

Ventilation: Ena Use local exhaust ventilation where appropriate.

8.4 Eye Protection:

If airborne dust persists, wear appropriate protective goggles. Wash eyes with clean water where there is potential eye contact.

- 8.5 Skin Protection: Wear protective clothing and gloves. Wash immediately if skin is contaminated. Remove and wash contaminated clothing and clean up equipment before re-use. Wash thoroughly with soap and water after handling.

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance:	White flat bevelled solid tablet
Odour:	Characteristic Chlorine Odour
pH as is:	Not Applicable
pH in solution:	5.0 - 6.0 approx.
Solubility:	Freely soluble
Decomposition temp:	225 – 250°C
Oxidising Properties:	Non oxidising solid
Flash Point:	Not applicable - solid
Flammability:	Non-flammable but can be Exothermic in temperatures >50°C especially if combined with prolonged high humidity.
Explosion Properties:	Not explosive

10. STABILITY & REACTIVITY

- 10.1 Chemical Stability: The product is stable if stored in a cool, dry well-ventilated area with container tightly closed.
- 10.2 Reactivity:
Under normal conditions of storage & use, hazardous reactions will not occur.
Mixing this product with acid solutions or ammonia will release dangerous Chlorine Gas.
- 10.3 Conditions to Avoid:
Do not store on or near heat sources or naked flame. Do not store above 50°C for prolonged periods.
Avoid moisture. NaDCC decomposes at temperatures above 225°C liberating toxic gases.
Avoid direct contact of tablets with combustible materials (oil, cardboard, etc)
- 10.4 Possibility of hazardous reactions:
Extremely reactive to (LIQUID) acids, alkalis, reducing agents, ammonia, Urea, Nitrogen containing compounds, calcium hypochlorite & reactive to cationic surfactants.
Contact with water liberates chlorine and with nitrogen compounds may cause explosion. Avoid direct contact with organic materials; oils, grease, sawdust, reducing agents, nitrogen containing compounds, calcium hypochlorite, other oxidizers.
- 10.5 Oxidising properties:
In-house tests indicate the tablets at less than 75% troclosene sodium with no other combustible materials added were not oxidising

11. TOXICOLOGICAL INFORMATION

- 11.1 Information on hazard classes as outlined in Regulation (EC) No 1272/2008 and carried into UK Law:
- Acute toxicity:
Based on available data, the classification criteria are not met.

Troclosene sodium -based on the available data, the criteria has not been met for acute toxicity

Oral LD50 (rat) ca. 1420mg/kg

Oral LD50 (rabbit) ca. 2500mg/kg

Dermal LD50 (rat) > 5000mg/kg

Skin corrosion:

Based on available data, the classification criteria are not met.

Derma *(rabbit) > 2000mg/kg

Serious Eye damage/irritation:

Causes serious eye damage. Troclosene sodium is corrosive to eyes.

Germ cell mutagenicity:

Did not cause mutagenicity in testing (E. coli).

Carcinogenicity:

Troclosene sodium not thought to be carcinogenic.

Reproductive toxicity:

Not thought to affect reproductive function or foetal development.

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

May cause respiratory irritation.

STOT-SE = Specific Target Organ Toxicity - Single Exposure

Based on available data, the classification criteria are not met.

11.2 Long term effects: Unknown but may cause skin, eye, or bronchial tract irritation with prolonged exposure.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Troclosene sodium in its neat form is highly toxic to fish if released in large quantities in a confined volume of water. Do not discharge into lakes, ponds, streams or public water unless in accordance with local regulations.

Troclosene sodium - Species	Time	Test	Value	Units
Fish (Bluegill sunfish)	96h	LC50	0.25 – 1.0	mg/l
Flea - Daphna magna	48h	LC50	0.196	mg/l
Duck	Oral	LD50	1916	mg/Kg

12.2 Persistence and degradability – not thought to persist in the environment.

- 12.3 Bio accumulative potential - not bio-accumulative.
12.4 Mobility in soil: Rapidly breaks down.
12.5 Not thought to be PBT (Persistent, Bio-accumulative or Toxic) substance.

Remarks: Not classed as hazardous to the ozone layer.

13. DISPOSAL INFORMATION

Refer to section 6, then:

Disposal should be done in accordance with local Water Authority or Environment Agency regulations.

14. TRANSPORT INFORMATION

ADR/RID

UN Number: UN3077

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Technical Name: Troclosene sodium mixture (Sodium Dichloro - 1,3,5 -Triazinetrione Anhydrous)

Class: 9

Packing Group: III

Special Provisions/Remarks: As per ADR 2025 Special Provision 375, this product when carried in a single or combination packaging containing a net quantity per single or inner packaging of 5kg or less is not subject to any other provisions of ADR provided the packaging meets the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IMDG

UN Number: UN3077

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Technical Name: Troclosene sodium mixture (Sodium Dichloro - 1,3,5 -Triazinetrione Anhydrous)

Class: 9

Packing Group: III

Special Provisions/Remarks: Marine pollutants when carried in a single or combination packaging containing a net quantity per single or inner packaging of 5kg or less is not subject to any other provisions of this code provided the packaging meets the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. accordance with IMDG 2024.

To be shipped as Non-Dangerous Goods under IMDG 2.10.2.7. 2024.

ICAO/IATA

UN Number: UN3077

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Sodium Dichloro - 1,3,5 -Triazinetrione Anhydrous, mixture)

Technical Name: Troclosene sodium mixture (Sodium Dichloro - 1,3,5 -Triazinetrione Anhydrous)

Class: 9

Packing Group: III

Special Provisions/Remarks: As per IATA 66th Edition, Special provision 375 of 2015 UN Model Regulations (Special Provision A197) for the transportation of dangerous goods, this product is not subject to the requirements of IATA provided that it is packed in single or combination packaging/s of 5kgs or less and that the packaging/s meet the general provisions of 5.0.2.4 .1, 5.0.2.6.1.1 and 5.0.2.8 and exempts the product from labelling and documentation of DGR (Dangerous Goods Regulations).

15. REGULATORY INFORMATION

This product is classified as a disinfectant and/or a biocide.

- 15.1 Safety, health and environmental regulations:
- The product is classified in accordance with the Chemicals (Hazard Information and EC Regulation 1272/2008 (CLP). The Chemicals (Hazard information and Packaging for Supply) Regulations 2009. The Control of Substances Hazardous to Health Regulations. Health and Safety at Work Act. EU Biocides Products Directive Article 95 listed supplier.

15.2 Chemical safety assessment No chemical safety assessment has been carried out.

16. OTHER INFORMATION

Full test risk phrases section 2: 50/

CLP Classification (Section 3):

- Hazardous to Aquatic Environment: Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic
- Physical hazard: Oxidising Solid – Category 2.
- Contact Hazard; Eye; Category 2. Causes serious eye irritation
- Target Organ Toxicity: (Single exposure): Category 3; May cause respiratory tract irritation
- Acute toxicity: Oral; Category 4. – harmful if swallowed
- Physical Hazard Statement: May intensify fire; Oxidiser
- Supplemental Hazard Statement: Contact with acids liberates toxic gas,

NOTE: The information is intended to give a general guidance as to health and safety and relates only to the specific material designated and may not be valid for such material if used in combination with other material or in another process. This information is presented in good faith to the best of the company's knowledge and believed to be correct at the date prepared however no warranty or representation expressed or implied is made as to the accuracy or completeness of the information or continuing accuracy of this data. In no event will Maclin Group be responsible for damages of any nature whatsoever resulting from the use or reliance of this data. It is for the user to satisfy themselves as to the suitability of such information for their particular use. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product. END

