

HYDRACHEM LIMITED

MATERIAL SAFETY DATA SHEET (MSDS 087/98/EEC)

1. Identification of the Preparation and of the Company

1.1 Identification of the Preparation:

3.25G Effervescent Chlorine Tablet

1.2 Company Identification

Hydrachem Ltd
Gillmans Industrial Estate
Billingshurst
West Sussex RH14 9EZ
Telephone: 01403 784332

1.3 Emergency Telephone Number

International Access Code + 44 1403 784332

2. Composition/Information on Ingredients

2.1 Chemical Name

Sodium Dichloroisocyanurate Anhydrous (NaDCC) 53% w/w
1,3,5 - Triazine -2,4,6 (1H,3H,5H) - Trione
1,3, - Dichloro, Sodium Salt

2.2 Synonym

Sodium Dichloro -1,3,5 - Triazinetrione Anhydrous
Sodium Dichloro - S - Triazine -2,4,6 (1H,3H,5H)-Trione
Sodium Troclosene

2.3 Chemical Family

Chlorinated S-Triazine Triones

2.4 Formula

$C_3Cl_2N_3O_3Na$

2.5 CAS Number

2893-78-9

2.6 EINECS Number

220-767-7

2.7 Chemical Name

Adipic Acid

1,6- Hexanedioic Acid - Range 10 - 25% w/w

2.8 Chemical Family

Saturated Dicarboxylic Acid

2.9 Formula

$\text{COOH}(\text{CH}_2)_4\text{COOH}$

2.10 Synonyms

1,4 - Butanedicarboxylic Acid
Adipinic Acid

2.11 CAS Number

124-04-9

2.12 EINECS Number

204-673-3

3. Hazards Identification

Harmful

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

3.1 Health Effects of Tablet (NOT resultant solution)

Effect On Skin:	Irritation and burning
Effect On Eyes:	Irritation and burning
Effect On Ingestion:	Harmful if swallowed. Nausea, headache, vomiting & upper abdominal pain.
Effect On Inhalation	Unlikely route of exposure unless tablet breaks into powder, then material may be irritant to mucous membranes

HSE Occupational Exposure Limits (EH40/93)

Long Term Exposure Limit to Chlorine - (8 hours TWA) 0.5ppm 1.5mgm⁻³

Short Term Exposure Limit to Chlorine - (10 minutes) 1ppm 3mgm⁻³

4. First Aid Measures

Eye Contact:	Immediately flush with plenty of clean water for at least 15 minutes. If irritation persists, seek medical attention.
Skin Contact:	Promptly wash thoroughly with water for at least 15 minutes while removing contaminated clothing. Wash any contaminated clothing well before re-use.
Ingestion:	Immediately rinse mouth, then drink plenty of water or milk. Do not induce vomiting. Seek medical attention.
Inhalation:	Move to fresh air. If irritation persists, seek medical attention.

5. Fire Fighting Measures

5.1 Special Fire or Explosion Hazards

Product is not flammable itself, but contact with combustible material may cause fire. Product combustible if dehydrated by drying. Decomposes above 250°C with release of chlorine & other toxic fumes.

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

Pressurised water or dry powder. Do not use dry fire extinguishers containing ammonium compounds.

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.

Any 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.

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 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 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.

If spillage of tablets is large (more than 100Kg), place into bins lined with polythene bags and eliminate in accordance with locally valid disposal regulations

7. Handling & Storage

7.1 Recommended Storage Conditions

Store away from all incompatibles and combustibles (see section 10). Store in a cool, dry, well ventilated place. Moisture sensitive. Avoid high humidity levels. Do not allow water to get into container. Keep away from fire, heat, flame & direct sunlight. Keep container tightly closed. Keep out of reach of children. Never store damp or contaminated material.

7.2 Recommended Handling Precautions

Avoid contact with eyes, skin & clothing.

When handling large quantities of tablets, wear chemical resistant gloves and safety goggles.

Avoid breathing any dust.

Wash thoroughly after handling.

Use protective equipment recommended in section 8.

Do not eat, drink or smoke when handling this material.

8. Exposure Controls/Personal Protection

- 8.1 Respiratory Protection: Where any dust in the breathing zone cannot be controlled with ventilation, wear an officially approved respirator (NIOSH/MSHA or equivalent agency) for protection against airborne dust.
- 8.2 Ventilation: Use local exhaust ventilation where appropriate
- 8.3 Eye Protection: If airborne dust concentrations are high, wear appropriate protective goggles. Wash eyes with clean water where there is potential eye contact.
- 8.4 Skin Protection: When handling large bulk quantities wear protective 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 tablet
Odour:	Characteristic Chlorine Odour
pH:	As is - not applicable
pH:	In solution - 5.0 - 6.0 approx.
Solubility:	Freely soluble
Oxidising Properties:	Non-oxidising
Flash Point:	Not flashing
Flammability:	Not flammable
Autoflammability:	Not autoflammable
Explosion Properties:	Not explosive

10. Stability & Reactivity

10.1 Conditions to Avoid

Do not store on or near heat sources or naked flame. Avoid moisture. NaDCC decomposes at temperatures above 240°C liberating toxic gases.

10.2 Materials to Avoid

Contact with water liberates chlorine and with nitrogen compounds may cause explosion. Avoid organic materials, oils, grease, sawdust, reducing agents, nitrogen containing compounds, calcium hypochlorite, other oxidizers, acids, alkalis, cationic and certain non-ionic surfactants.

11. Toxicological Information

Route of entry: Inhalation, skin contact & ingestion.

Inhalation of NaDCC is irritating to the nose, mouth, throat and lungs.

Ingestion of NaDCC can cause irritation and or/burns to the gastrointestinal tract.

Skin & Eye Contact: with NaDCC can cause severe irritation and/or burns, characterized by redness, swelling and scab formation. May cause impairment of vision and corneal damage.

Toxicological Data: NaDCC

Acute toxicity

Oral LD50 (rat) ca. 1825mg/kg

Eye Irritation (rabbit) Severe irritant

Rabbit dermal LD50 > 20,000mg/kg

Carcinogenicity

This chemical is not considered to be carcinogenic by any reference source.

12. Ecological Information

NaDCC is highly toxic to fish. Do not discharge into lakes, ponds, streams or public water unless in accordance with the permit of official regulations.

13. Disposal Information

Refer to section 6, then :-

Disposal should be done in accordance with all official regulations.

If material is dry, incineration is recommended.

14. Transport Information

Keep container strictly dry

Keep away from FIRE, HEAT, FLAME & DIRECT SUNLIGHT

Keep away from incompatible materials listed in section 10
Keep out of reach of children

UN Number: N/A
Packing Group: N/A
IMDG Code: N/A
IMDG Page: N/A
ADR/RID: N/A
ICAO/IATA: N/A

15. Regulatory Information

Label for supply: HARMFUL

Risk Phrases:

- 8) Contact with combustible material may cause fire
- 22) Harmful if swallowed
- 31) Contact with acids liberates toxic gas
- 36/37) Irritating to eyes and respiratory system

Safety Phrases:

- 8) Keep container dry
- 26) In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
- 41) In case of fire and/or explosion do not breathe fumes

Regulatory References:

The Chemicals (Hazard Information & Packaging) Regulations
1993.

16. Other Information

Information compiled 27.07.98

The information herein is based on data considered to be accurate as of the date of preparation of the Material Safety Data Sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. 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.