**Chlorine Reducer**

## 1. Identification of the substance/preparation and of the company/undertaking

**1.1 Product Identifier** Sodium thiosulphate pentahydrate

**1.2 Relevant Identified uses of the substance or mixture and uses advised against**

Uses: Water Treatment
Restrictions: None

**1.3 Details of the supplier of the safety data sheet**

Company: Complete Pool Controls Ltd
Unit 2, The Park
Stoke Orchard
Bishops Cleeve
Gloucestershire
GL52 7RS

Telephone: +44 (0) 8712 229081 Fax: +44 (0) 8712 229083
E-mail: sales@cpc-chemicals.co.uk

1.4 **Emergency Telephone**

Tel: +44 (0) 8712 229081 (office hours) +44 (0) 1242 300271 ( outside of office hours)

## 2. Hazard Identification

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

The product is not classified according to the CLP regulations

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008**

The product does not have to be labelled due to the calculation procedure of the 'General Classification guideline for preperations of the EU' in the latest version

| | |
|---|---|
| P102 | Keep out of reach of children |
| P405 | Store locked up |
| P501 | Dispose of contents/container in accordance with national regulations. |

**2.3 Other Hazards** This substance is not classified as PBT or vPvB according to current EU criteria.

## 3. Composition/information on ingredients

**3.1 Substances**

| ***Chemical Name*** | ***CAS No:*** | ***EC No:*** |
|---|---|---|
| Sodium Thiosulphate Anhydrous | 7772-98-7 | 231-867-5 |

REACH registration notes: According to REACH Annex V, paragraph 6; the hydrates of a substance are covered by the registration of the anhydrous material.

## 4. First Aid measures

**4.1 Description of first aid measures**

Inhalation: Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

Ingestion: Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention if any discomfort continues

## 4. First Aid measures

Skin contact: Remove affected person from source of contamination. Remove contaminated clothing. Rinse immediately with plenty of water. Get medical attention if any discomfort continues.

Eye contact: Rinse with water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

General information: For further information, please refer to section 11.

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

Notes for the doctor: No specific recommendations. If in doubt, get medical attention promptly.

## 5. Fire fighting measures

**5.1 Extinguishing media:**

Suitable extinguishing media: Use fire extinguishing methods suitable to surrounding conditions.

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

Haz. Combustion products: Thermal decomposition or combustion products may include the following substances: Hydrogen sulphide (H2S). Oxides of the following substances: Sodium. Sulphur.

**5.3 Advice for fire-fighters**

Special protective equipment: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

## 6. Accidental release Measures

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

Personal Precautions: Avoid inhalation of dust. Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet.

**6.2 Environmental precautions**

Environmental precautions: Avoid discharge into drains or watercourses or onto the ground.

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

Clean-up procedures: Avoid generation and spreading of dust. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water.

**6.4 Reference to other sections**

Other sections: See Section 8 for information on personal protection equipment
See Section 13 for disposal information

## 7. Handling and storage

**7.1 Precautions for safe handling**

Usage precautions: Avoid spilling. Avoid contact with skin and eyes. Avoid handling which leads to dust formation. Provide adequate ventilation.

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

Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container. Keep away from food, drink and animal feeding stuffs. Store away from incompatible materials (see Section 10).

**7.3 Specific end uses**

Specific use(s): The identified uses for this product are detailed in Section 1.2.

## 8. Exposure control/personal protection

### 8.1 Control parameters

Occupational exposure limits

| | | |
|---|---|---|
| Long-term exposure limit (8-hour TWA): OES | | 4 mg/m³ |
| Ingredient comments OES = Occupational Exposure Standard | | |
| DNEL | Workers - Inhalation; Long term systemic effects: | 374 mg/m³ |
| | General population - Inhalation; Long term systemic effects: | 110 mg/m³ |
| | General population - Oral; Long term systemic effects: | 14 mg/kg/day |
| PNEC | Fresh water; 0.8 mg/l | |
| | Marine water; 0.08 mg/l | |
| | STP; 102.6 mg/l | |

### 8.2 Exposure controls

**Protective equipment**

**Engineering measures**

| | |
|---|---|
| Appropriate Controls: | Provide adequate ventilation. Avoid inhalation of dust. Observe any occupational exposure limits for the product or ingredients. Mechanical ventilation or local exhaust ventilation may be required. |
| Eye/face protection | The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166. |
| Hand protection | It is recommended that chemical-resistant, impervious gloves are worn. To protect hands from chemicals, gloves should comply with European Standard EN374. The selected gloves should have a breakthrough time of at least 8 hours. It is recommended that gloves are made of the following material: Rubber (natural, latex). Thickness: 0.5 mm Chloroprene rubber. Thickness: 0.5 mm Nitrile rubber. Thickness: 0.35 mm Butyl rubber. Thickness: 0.5 mm Viton rubber (fluoro rubber). Thickness: 0.4 mm Polyvinyl chloride (PVC). Thickness: 0.5 mm The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. |
| Skin and body protection | Provide eyewash station and safety shower. Wear appropriate clothing to prevent reasonably probable skin contact. |
| Hygiene measures | Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke. |
| Respiratory protection | If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P1. Particulate filters should comply with European Standard EN143 |

**Environmental exposure controls**

| | |
|---|---|
| General advice: | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. |

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Appearance | Crystals. |
| Colour | White. |
| Odour | Odourless. |
| Odour threshold | Not applicable. |
| pH | pH (diluted solution): 6.5 - 8.5 |
| Melting point | Will decompose at temperatures exceeding 100°C. |
| Initial boiling point and range | The sample decomposes before boiling. |
| Flash point | Endpoint waived according to REACH Annex VII, IX or XI. Substance is inorganic. |
| Evaporation rate | Not applicable. |
| Upper/lower flammability or explosive limits | Not flammable. |
| Other flammability | The product is not flammable. |
| Vapour pressure | No information available. |
| Vapour density | No information available. |
| Relative density | Anhydrous solid: 1.69 @ 20°C |
| Solubility(ies) | Soluble in water. |
| Partition coefficient | Not applicable. Substance is inorganic. |
| Auto-ignition temperature | The product is not flammable. |
| Decomposition Temperature | 100°C |
| Viscosity | Not applicable. |
| Explosive properties | Not explosive. |
| Oxidising properties | Does not meet the criteria for classification as oxidising. |

### 9.2 Other Information

| | |
|---|---|
| Molecular weight | 158.1 |

## 10. Stability and reactivity

### 10.1 Reactivity

Reactivity: Stable under the prescribed storage conditions.

### 10.2 Chemical stability

Advice: Stable under the prescribed storage conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions: The following materials may react violently with the product: Fluorine. Strong oxidising agents. Acids.

### 10.4 Conditions to avoid

Conditions to avoid: Water, moisture. The substance is hygroscopic and will absorb water by contact with the moisture in the air. Avoid excessive heat for prolonged periods of time.

### 10.5 Incompatible materials

Materials to avoid: Fluorine. Acids. Strong oxidising agents.

### 10.6 Hazardous decomposition products

Haz. Decomp. products: When heated, vapours/gases hazardous to health may be formed. Hydrogen sulphide (H2S). Oxides of the following substances: Sodium. Sulphur.

## 11. Toxicilogical Information

### 11.1 Information on toxicilogical effects

| | |
|---|---|
| Toxicological effects | Not classified. |
| Acute toxicity - oral | |
| Notes (oral $LD_{50}$) | $LD_{50}$ > 2000 mg/kg, Oral, Rat OECD 401. REACH dossier information. Read-across approach: Calcium thiosulphate. Based on available data the classification criteria are not met. |
| Acute toxicity - dermal | |
| Notes (dermal $LD_{50}$) | $LD_{50}$ > 2000 mg/kg, Dermal, Rabbit OECD 402. REACH dossier information. Read-across approach: Potassium thiosulphate. Based on available data the classification criteria are not met. |
| Acute toxicity - inhalation | |
| Notes (inhalation $LC_{50}$) | LC50 (4h) > 2.6 mg/l, Inhalation, Rat OECD 403. REACH dossier information. Read-across approach: Potassium thiosulphate. Based on available data the classification criteria are not met. |
| Skin corrosion/irritation | |
| Animal data | Not irritating. REACH dossier information. Read-across approach: Sodium sulphite [Na2SO3] OECD 404. Based on available data the classification criteria are not met. |
| Serious eye damage/irritation | Not irritating. REACH dossier information. Read-across approach: Ammonium thiosulphate. Based on available data the classification criteria are not met. |
| Skin sensitisation | Not sensitising. REACH dossier information. Read-across approach: Ammonium thiosulphate. Based on available data the classification criteria are not met. |
| Genotoxicity - in vitro | REACH dossier information. Read-across approach: Ammonium thiosulphate. Based on available data the classification criteria are not met. |
| Carcinogenicity | REACH dossier information. Read-across approach: Potassium metabisulphite. No evidence of carcinogenicity in animal studies. |
| IARC carcinogenicity | Not listed. |
| Reproductive toxicity - development | This substance has no evidence of toxicity to reproduction. REACH dossier information. Based on available data the classification criteria are not met. |
| Specific target organ toxicity - repeated exposure | |
| STOT - repeated exposure | NOAEL <955 mg/kg, Oral, Rat REACH dossier information. Read-across approach: Sodium metabisulphite [Na2S2O5]. Based on available data the classification criteria are not met. |
| Aspiration hazard | Not relevant. |

**General information**

| | |
|---|---|
| Inhalation | Dust in high concentrations may irritate the respiratory system. |
| Ingestion | Gastrointestinal symptoms, including upset stomach. Diarrhoea. |
| Skin contact | Powder may irritate skin. |
| Eye contact | Redness. Particles in the eyes may cause irritation and smarting. |

## 12. Ecological Information

Ecotoxicity : The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment

### 12.1 Toxicity

Ecotoxicity : Practically non- toxic to aquatic organisms.

## 12. Ecological Information

**12.1 Toxicity**

**Acute toxicity**

- aquatic invertebrates: $EC_{50}$, 48 hours: 230 mg/l, Daphnia magna REACH dossier information. Read-across approach: Ammonium thiosulphate.

- aquatic plants: NOEC, 72 hours: >=100 mg/l, Pseudokirchneriella subcapitata OECD 201. REACH dossier information. Read-across approach: Ammonium thiosulphate.

-microorganisms: NOEC, 3 hours: >=1000 mg/l, Activated sludge OECD 209. REACH dossier information. Read-across data. Ammonium thiosulphate.

**Chronic toxicity**

- fish early life stage: NOEC, 34 days: >=316 mg/l, Brachydanio rerio (Zebra Fish) OECD 210. REACH dossier information. Read-across approach: Sodium sulphite [Na2SO3]

**12.2 Persistence and degradability**

Persistence and degradability: The product contains only inorganic substances which are not biodegradable.

**12.3 Bioaccumlative potential**

Partition coefficient: Not applicable. Substance is inorganic.

**12.4 Mobility in soil**

Mobility: The product is soluble in water.

**12.5 PBT and PvB assessment**

PBT identification: This substance is not classified as PBT or vPvB according to current EU criteria.

**12.6 Other adverse effects**

Other adverse effects: No data available

## 13. Disposal Considerations

**13.1 Waste treatment methods**

Disposal methods: Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Dispose of waste via a licensed waste disposal contractor.

## 14. Transport Information

**General :** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

| | |
|---|---|
| **14.1 UN Number** | Not applicable |
| **14.2 UN proper shipping name** | Not applicable |
| **14.3 Transport hazard class(es)** | Not applicable |
| **14.4 Packaging Group** | Not applicable |
| **14.5 Environmental hazards** | No |
| **14.6 Special precautions for user** | Not applicable |
| **14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** | Not applicable |

## 15. Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for this substance or mixture.**

| | |
|---|---|
| EU legislation | Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).<br>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). |
| Guidance | Workplace Exposure Limits EH40 |

**15.2 Chemical Safety Assessment**

A chemical safety assessment has been carried out.

## 16. Other information

This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty or merchantability, or fitness for any particular use, or any other warranty, express or implied, with respect to this information, and we assume no liability resulting from use of this information Users should make their own investigations to determine the suitability of the information for their particular needs and uses.

▌Indicates updated section

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