

MATERIAL SAFETY DATA SHEET

Sodium Thiosulphate

Section 01 - Chemical And Product And Company Information

Product Identifier Sodium Thiosulphate

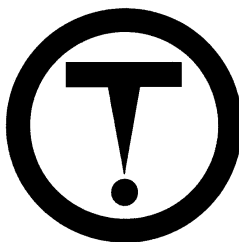
Product Use Bleaching agent, an ingredient in photographic fixer solutions, for extraction of silver from ores, as a mordant in dyeing and printing textiles, reducers in chrome dyeing, in leather manufacture and a reagent in analytical and organic chemistry. Antidote for cyanide poisoning.

Supplier Name ClearTech Industries Inc.
2302 Hanselman Avenue
Saskatoon, SK. Canada
S7L 5Z3

Prepared By ClearTech Industries Inc. Technical Department
Phone: (306)664-2522

Preparation Date March 23, 2011

24-Hour Emergency Phone 306-664-2522



Section 02 - Composition / Information on Ingredients

Hazardous Ingredients Sodium Thiosulphate >98%

CAS Number Sodium Thiosulphate 7772-98-7

Synonym (s) Sodium thiosulphate anhydrous, sodium hyposulphite, sodium thiosulphate crystal, thiosulphuric acid disodium salt

Section 03 - Hazard Identification

Inhalation Breathing product dust or mist may irritate respiratory tract.



- Skin Contact / Absorption**..... Dust or mist may cause irritation from prolonged contact. Aqueous solutions may cause irritations from repeated or prolonged contact.
- Eye Contact**..... Dust, solutions, or mist may irritate or burn the eyes and cause temporary conjunctivitis.
- Ingestion**..... Relatively low in acute toxicity but may cause irritation of the gastrointestinal tract and purging if large quantity is ingested.
- Exposure Limits**..... No OSHA/TWA or ACGIH/TLV established for sodium thiosulphate.
OSHA/TWA: 5ppm (SO₂)
ACGIH/TLV: 2ppm (SO₂)
ACGIH/STEL: 5ppm (SO₂)

Section 04 - First Aid Measures

- Inhalation**..... Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention if difficulties persist.
- Skin Contact / Absorption**..... Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
- Eye Contact**..... Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek medical attention if irritation persists.
- Ingestion**..... If swallowed do not induce vomiting. If vomiting occurs, lean patient forward or place on left side with head down to maintain open airway and prevent aspiration. Do not give water to patient becoming unconscious. If conscious then rinse out mouth with water and slowly drink water.
- Additional Information**..... Physician to treat symptomatically.

Section 05 - Fire Fighting

- Conditions of Flammability**..... Non-flammable. Heating above 100°C yields flammable residue, sodium sulphide.
- Means of Extinction**..... Product does not burn. Where fire is involved, use any fire fighting agent appropriate for surrounding material; use water spray to cool fire-exposed surfaces.
- Flash Point**..... Not applicable



- Auto-ignition Temperature**..... Not applicable
- Upper Flammable Limit** Not applicable
- Lower Flammable Limit**..... Not applicable
- Hazardous Combustible Products**... If involved in a fire, toxic and irritating gases (sulphur dioxide gas: toxic, corrosive, and an oxidizer) and residue (flammable sodium sulphide residue) may evolve.
- Special Fire Fighting Procedures**..... Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
- Explosion Hazards**..... Not available

Section 06 - Accidental Release Measures

- Leak / Spill**..... Wear appropriate personal protective equipment. Ventilate area. Stop or reduce leak if safe to do so. Prevent material from entering sewers. Cautiously spray residue with plenty of water.
- Deactivating Materials**..... Not available

Section 07 - Handling and Storage

- Handling Procedures**..... Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.
- Storage Requirements**..... Store in cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials.

Section 08 - Personal Protection and Exposure Controls

Protective Equipment

- Eyes**..... Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
- Respiratory**..... If use creates dust formations, then a NIOSH-approved respirator with a dust cartridge is recommended. If sulphur dioxide is evolved, a self-contained breathing apparatus should be used



- Gloves**..... Impervious gloves of chemically resistant material (neoprene, rubber, PVC) should be worn. Wash contaminated clothing and dry thoroughly before reuse.
- Clothing**..... Body suits, aprons, and/or coveralls of chemical resistant material should be worn. Wash contaminated clothing and dry thoroughly before reuse.
- Footwear**..... No special footwear is required other than what is mandated at place of work.

Engineering Controls

- Ventilation Requirements**..... Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems.
- Other**..... Emergency shower and eyewash should be in close proximity.

Section 09 - Physical and Chemical Properties

- Physical State**..... Solid
- Odor and Appearance**..... No odor; clear to white granules or crystals.
- Odor Threshold**..... Not applicable
- Specific Gravity (Water=1)**..... 1.667
- Vapor Pressure (mm Hg, 20C)**..... Not applicable
- Vapor Density (Air=1)**..... Not applicable
- Evaporation Rate**..... Not applicable
- Boiling Point**..... Decomposes at temperatures >100°C
- Freeze/Melting Point**..... Approximately 48°C
- pH**..... Not available
- Water/Oil Distribution Coefficient**.... Not applicable
- Bulk Density**..... Not available
- % Volatiles by Volume**..... Not applicable



Solubility in Water..... 33% at 0°C, soluble in water

Molecular Formula..... Na₂S₂O₃

Molecular Weight..... 158.11

Section 10 - Stability and Reactivity

Stability..... Stable under normal conditions. Avoid temperatures 100°C or greater.

Incompatibility..... Incompatible with strong oxidizers, acids and water reactive materials.

Hazardous Products of Decomposition.. Oxides of sulphur and hydrogen sulphide

Polymerization..... Will not occur

Section 11 - Toxicological Information

Irritancy..... Irritant to skin and eye after repeated or prolonged contact.

Sensitization..... Not available

Chronic/Acute Effects..... No unusual toxicity reported

Synergistic Materials..... Not available

Animal Toxicity Data..... LD₅₀(oral, rat): >8000 mg/kg

Carcinogenicity..... Not known to be a carcinogenic.

Reproductive Toxicity..... Not available

Teratogenicity..... Not available

Mutagenicity..... Not available

Section 12 - Ecological Information

Fish Toxicity..... Not available

Biodegradability..... Not available



Environmental Effects..... May be harmful to aquatic organisms.

Section 13 - Disposal Consideration

Waste Disposal..... Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 - Transportation Information

TDG Classification

Class..... Not regulated

Group..... Not regulated

PIN Number..... Not regulated

Other..... Secure containers (full and/or empty) with suitable hold down devices during shipment.

Section 15 - Regulatory Information

WHMIS Classification.....D2

NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 - Other Information

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / MSDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution[®] initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Material Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service or technical service department.



ClearTech Industries Inc. - Locations

Corporate Head Office: 2302 Hanselman Avenue, Saskatoon, SK, S7L 5Z3
Phone: 306-664-2522
Fax: 306-665-6216

www.ClearTech.ca

Location	Address	Postal Code	Phone Number	Fax Number
Richmond, B.C.	12431 Horseshoe Way	V7A 4X6	604-272-4000	604-272-4596
Calgary, AB.	5516E - 40 th St. S.E.	T2C 2A1	403-279-1096	403-236-0989
Edmonton, AB.	11750 - 180 th Street	T5S 1N7	780-452-6000	780-452-4600
Saskatoon, SK.	2302 Hanselman Avenue	S7L 5Z3	306-933-0177	306-933-3282
Regina, SK..	555 Henderson Drive	S42 5X2	306-721-7737	306-721-8611
Winnipeg, MB.	340 Saulteaux Crescent	R3J 3T2	204-987-9777	204-987-9770
Mississauga, ON.	7480 Bath Road	L4T 1L2	905-612-0566	905-612-0575

24 Hour Emergency Number - All Locations - 306-664-2522