



Safety Data Sheet

Section 01 - Identification

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| Product Identifier | Sodium Thiosulphate |
| Other Means of Identification | Sodium Thiosulphate anhydrous, sodium hyposulphite, sodium Thiosulphate crystal, thiosulphuric acid disodium salt, and disodium Thiosulphate. |
| Product Use and Restrictions on 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. |
| Initial Supplier Identifier | ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7 |
| Prepared By | ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503 |
| 24-Hour Emergency Phone | Phone: 1 (306) 664 – 2522 |

Section 02 - Hazard Identification

GHS-Classification

This product has been assessed in accordance with the Hazardous Products Regulations and is not classified as a hazardous substance or mixture.

Section 03 - Composition / Information on Ingredients

| Chemical Name | CAS Number | Weight % | Unique Identifiers |
|---------------------|------------|----------|--------------------|
| Sodium Thiosulphate | 7772-98-7 | >98% | |
| Water | 7732-18-5 | <2% | |

Section 04 - First Aid Measures

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| Inhalation | If symptoms are experienced, remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention. |
| Skin Contact / Absorption | Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists. |
| Eye Contact | Contact lenses should never be worn when working with this product. Flush immediately with water for at least 30 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek medical attention if irritation occurs or 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 Measures

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| Suitable Extinguishing Media | Product does not burn. Use extinguishing agents compatible with sodium thiosulphate and appropriate for surrounding fire. |
| Unsuitable Extinguishing Media | Not Available |
| Specific Hazards Arising From the Chemical | Decomposes slowly in water and may release very toxic and extremely flammable hydrogen sulfide gas as well as corrosive substances such as hydrogen sulfite and sulfuric acid. Under fire conditions or when heated, sodium thiosulfate gives off hydrogen sulfide, sulfur dioxide and trioxide, pyrosulfate, sodium pentasulfide, sodium sulfide, and sodium oxides. Containers may rupture explosively with a sudden release of large amounts of toxic gases. |
| Special Protective Equipment and Precautions for Fire-Fighters | Wear NIOSH-approved self-contained breathing apparatus and protective clothing. |
| Further Information | Not Available |

Section 06 - Accidental Release Measures

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| Personal Precautions / Protective Equipment / Emergency Procedures | Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue. |
| Environmental Precautions | Prevent material from entering sewers. |
| Methods and Materials for Containment and Cleaning Up | SMALL SPILL: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. LARGE SPILL: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow material to evacuate through the sanitary system. |

Section 07 - Handling and Storage

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| Precautions for Safe Handling | 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. |
| Conditions for Safe Storage | Store in cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials. |
| Incompatibilities | Strong oxidizers, acids and water reactive materials. |

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

| Component | Regulation | Type of Listing | Value |
|-----------------|------------|-----------------|-------|
| Sulphur dioxide | OSHA | TWA | 5ppm |
| | ACGIH | TLV | 2ppm |
| | ACGIH | STEL | 5ppm |

Engineering Control(s)

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| Ventilation Requirements | Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems. |
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| Other | Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity. |
| <u>Protective Equipment</u> | |
| Eyes/Face | No specific requirement, but it is good practice to wear safety goggles. |
| Hand Protection | No specific requirement, but it is good practice to prevent skin contact with the use of gloves. |
| Skin and Body Protection | No specific requirement, but it is good practice to prevent skin contact. No special footwear is required other than what is mandated at place of work. |
| Respiratory Protection | 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. |
| Thermal Hazards | Not Available |

Section 09 - Physical and Chemical Properties

Appearance

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| Physical State | Solid granules or crystals |
| Colour | Clear to white |
| Odour | No odour |
| Odour Threshold | Not Applicable |

Property

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| pH | 7.8 (10% solution) |
| Melting Point/Freezing Point | Not Applicable |
| Initial Boiling Point and Boiling Range | Not Applicable |
| Flash Point | Not Applicable |
| Evaporation Rate | Not Applicable |
| Flammability | Non-flammable. Heating above 100°C yields flammable residue, sodium sulphide. |
| Upper Flammable Limit | Not Applicable |
| Lower Flammable Limit | Not Applicable |
| Vapour Pressure (mm Hg, 20°C) | Extremely low. |
| Vapour Density (Air=1) | Not Applicable |
| Relative Density | Not Available |
| Solubility(ies) | Very soluble in water (70g/100mL at 20°C). Insoluble in ethanol. Not expected to be soluble in most organic solvents. Solubility increases in very polar solvents such as dimethylsulfoxide. |

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| Partition Coefficient: n-octanol/water | Not Applicable |
| Auto-ignition Temperature | Not Applicable |
| Decomposition Temperature | ~100°C |
| Viscosity | Not Applicable |
| Explosive Properties | Powdered material may form explosive dust-air mixture. |
| Specific Gravity (Water=1) | 2.27 |
| % Volatiles by Volume | Not Applicable |
| Formula | Na ₂ S ₂ O ₃ |
| Molecular Weight | 158.11 |

Section 10 - Stability and Reactivity

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| Reactivity | Not Available |
| Stability | Normally stable. Decomposes on exposure to air or light. |
| Possibility of Hazardous Reactions | May decompose violently above 223°C. Reacts slowly with water at room temperature. The rate of reaction with water increases as the temperature increases, or when the solutions are highly acidic or highly alkaline. |
| Conditions to Avoid | Not Available |
| Incompatible Materials | Strong oxidizers, acids and water reactive materials. |
| Hazardous Decomposition Products | Thermal decomposition releases very toxic and corrosive substances such as hydrogen sulfide, sulfur dioxide, sulfur trioxide, and other oxides of sulfur; as well as sodium sulfate, sodium sulfide, and sodium pentasulfide. Reaction with water forms sulfur, hydrogen sulfite, and sulfuric acid. Reaction with air forms sodium sulfate and sodium sulfide. |

Section 11 - Toxicological Information

Acute Toxicity

| Component | Oral LD₅₀ | Dermal LD₅₀ | Inhalation LC₅₀ |
|---------------------|-----------------------------|-------------------------------|-----------------------------------|
| Sodium Thiosulphate | >5000mg/kg (rat) | Not Available | Not Available |

Chronic Toxicity – Carcinogenicity

| Component | IARC |
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| Sodium Thiosulphate | Not known to be a carcinogenic. |

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| Skin Corrosion/Irritation | Dust or mist may cause irritation from prolonged contact. Aqueous solutions may cause irritations from repeated or prolonged contact. |
| Ingestion | Relatively low in acute toxicity but may cause irritation of the gastrointestinal tract and purging if large quantity is ingested. |
| Inhalation | Breathing product dust or mist may irritate respiratory tract. |
| Serious Eye Damage/Irritation | Dust, solutions, or mist may irritate or burn the eyes and cause temporary conjunctivitis. |

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| Respiratory or Skin Sensitization | No sensitizing effects known. |
| Germ Cell Mutagenicity | Not Available |
| Reproductive Toxicity | Not Available |
| STOT-Single Exposure | Swallowing larger amounts may irritate the gastrointestinal tract. May cause respiratory irritation. |
| STOT-Repeated Exposure | Not Available |
| Aspiration Hazard | Not Available |
| Synergistic Materials | Not Available |

Section 12 – Ecological Information

Ecotoxicity

| Component | Toxicity to Algae | Toxicity to Fish | Toxicity to Daphnia and Other Aquatic Invertebrates |
|------------------------------|------------------------|---|---|
| Sodium Thiosulphate | Not Available | LC ₅₀ (Gambusia affinis, 96hr): 24000mg/L | LC ₅₀ (Daphnia magna, 25hr): 2245mg/L |
| Biodegradability | Readily biodegradable. | | |
| Bioaccumulation | Not Available | | |
| Mobility | Soluble in water. | | |
| Other Adverse Effects | Not Available | | |

Section 13 – Disposal Considerations

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| Waste From Residues/Unused Products | Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act. |
| Contaminated Packaging | Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act. |

Section 14 – Transport Information

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| UN Number | Not Regulated |
| UN Proper Shipping Name | Not Regulated |
| Transport Hazard Class(es) | Not Regulated |
| Packaging Group | Not Regulated |
| Environmental Hazards | Not listed as a marine pollutant under Canadian TDG Regulations, schedule III. |
| Special Precautions | Not Available |
| Transport in Bulk | Not Available |

TDG

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| Other | Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position. |
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TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

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

Section 16 – Other Information

Preparation Date August 13, 2015

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 / SDS 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 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 center.

References:

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) PAN
- 6) HSDB
- 7) ECHA

ClearTech Industries Inc. - Locations

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