

Sodium Thiosulfate MSDS

Section 1: Product Name and Identification

- **Product Name:** [Sodium Thiosulfate](#)
- **Synonyms:** Sodium hyposulfite, Hypo, Thiosulfuric acid disodium salt
- **Chemical Formula:** $\text{Na}_2\text{S}_2\text{O}_3$
- **Product Use:** Commonly used for water dechlorination, as a fixer in photography, and in medical applications such as cyanide poisoning treatment.
- **Manufacturer Contact Information:**

Manufacturer's address, emergency contact number, and additional details to be added by the supplier.

Section 2: Composition/Ingredients

- **Chemical Composition:**
 - - Sodium Thiosulfate Pentahydrate (CAS No.: 10102-17-7) – 100%
- **Impurities:** No impurities unless specified by the manufacturer.

Section 3: Hazards Identification

- **GHS Classification:**
 - - Not classified as hazardous under GHS standards.
 - May cause mild irritation to eyes, skin, or upper respiratory tract with extended exposure.
- **Signal Word:** NONE
- **Hazard Statements:**
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- May cause slight irritation to skin or eyes.
- Non-flammable and non-reactive under normal conditions.
- **Precautionary Statements:**
 - - Avoid prolonged exposure to large amounts of dust or contact with eyes.
 - Maintain proper hygiene after handling.

Section 4: First Aid Measures

- **Eye Contact:** Rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Seek medical advice if irritation persists.
- **Skin Contact:** Wash affected area with soap and water. Remove any contaminated clothing and launder before reuse. If irritation occurs, consult a physician.
- **Inhalation:** Move the person to fresh air. If respiratory discomfort persists, seek medical attention.
- **Ingestion:** Rinse mouth with water. Do not induce vomiting. If significant amounts are ingested, contact a medical professional or poison control center immediately.

Section 5: Handling and Storage

- **Handling:**
 - - Avoid creating dust. Use in well-ventilated areas.
 - Wash hands thoroughly after handling.
 - Avoid inhalation of dust or prolonged skin contact.
- **Storage:**
 - - Store in a cool, dry, and well-ventilated location.
 - Keep container tightly closed to prevent contamination.

- Avoid moisture or high humidity, as sodium thiosulfate is hygroscopic and can decompose in water.
- Store separately from strong acids.

Section 6: Exposure Controls/Personal Protection

- **Engineering Controls:**
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 - Ensure proper ventilation, especially in areas where dust formation is likely. Use local exhaust systems if necessary.
- **Personal Protective Equipment (PPE):**
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 - **Eye Protection:** Use safety goggles or glasses.
 - **Skin Protection:** Wear chemical-resistant gloves.
 - **Respiratory Protection:** If excessive dust formation occurs, use an appropriate dust mask or respirator approved by standards such as NIOSH.
 - **Clothing:** Wear protective clothing to minimize direct skin contact.

Section 7: Physical and Chemical Properties

- **Appearance:** White crystalline powder or colorless crystals
- **Odor:** Odorless
- **pH:** 6.5 – 8.5 (5% aqueous solution)
- **Melting Point:** Decomposes around 48°C (hydrates lose water; stable as solution)
- **Boiling Point:** Not applicable for hydrated salt forms
- **Flash Point:** Non-combustible
- **Solubility in Water:** Highly soluble (approximately 70 g/100 mL at room temperature)
- **Density:** 1.7 g/cm³

- **Vapor Pressure:** Negligible

Section 8: Stability and Reactivity

- **Stability:** Stable under normal temperature and pressure when stored appropriately.
- **Reactivity:** Reacts with strong acids to release sulfur dioxide.
- **Conditions to Avoid:** Exposure to humid air or water, heat, and strong acids.
- **Hazardous Decomposition Products:** Sulfur dioxide and hydrogen sulfide may release when reacting with acids or decomposing at high temperatures.
- **Incompatible Materials:** Strong acids, strong oxidizing agents, and nitrates.

Section 9: Toxicological Information

- **Routes of Exposure:** Skin, eyes, inhalation, ingestion.
- **Acute Toxicity:**
 - - Low toxicity when swallowed in typical handling situations.
 - May cause gastrointestinal irritation if ingested in significant amounts.
 - Prolonged or repeated exposure to dust can irritate respiratory passages.
- **Skin Contact:** May cause mild irritation in sensitive individuals.
- **Eye Contact:** Possible redness or discomfort with direct contact.
- **Chronic Effects:** No evidence of significant long-term harmful effects.

Section 10: Disposal Considerations

- **Waste Disposal Methods:**
 - - Dispose of in accordance with local, regional, and national regulatory guidelines.
 - Avoid release into waterways or the environment.

- Use a licensed waste disposal company for proper disposal methods.