Sodium Thioglycolate MSDS

1. Product Name and Identification

- **Product Name:** Sodium Thioglycolate
- **Synonyms:** Sodium Mercaptoacetate, Thioglycolic Acid Sodium Salt
- **CAS Number:** 367-51-1
- **Chemical Formula:** $C_2H_3NaO_2S$
- **Recommended Use:** Depilatory agent, hair waving/straightening products, chemical intermediate, analytical reagent.
- **Company Identification:** [Enter Supplier Name and Contact Information Here]

2. Composition/Ingredients

- **Component Name:** Sodium Thioglycolate
- **CAS Number:** 367-51-1
- **Concentration:** ≥98%

3. Hazards Identification

Emergency Overview: This product is a white, hygroscopic powder with a distinct, unpleasant sulfur-like odor. It is toxic if swallowed and may cause an allergic skin reaction. Causes serious eye damage. Contact with acids will liberate toxic hydrogen sulfide gas.

Potential Health Effects:

- **Eye Contact:** Corrosive. Causes serious, potentially irreversible eye damage. Symptoms include severe pain, redness, and burns.
- **Skin Contact:** May cause skin irritation. Repeated or prolonged contact can lead to skin sensitization, causing an allergic reaction in susceptible individuals.
- **Inhalation:** Inhalation of dust can irritate the nose, throat, and respiratory system. The strong odor may cause discomfort.
- **Ingestion:** Toxic if swallowed. Can cause severe irritation to the digestive tract, with symptoms including nausea, vomiting, abdominal pain, and systemic effects.

4. First Aid Measures

- **Eye Contact:** Immediately and continuously flush eyes with large amounts of clean, low-pressure water for at least 15-20 minutes, holding eyelids apart. Remove contact lenses if present. Seek immediate medical attention.
- **Skin Contact:** Immediately remove all contaminated clothing. Wash the affected skin area thoroughly with plenty of soap and water. If an allergic reaction or irritation develops, seek medical advice.

- **Inhalation:** Move the individual to an area with fresh air. If breathing becomes difficult or respiratory irritation occurs, seek medical assistance.
- **Ingestion:** Call a poison control center or doctor immediately. Do not induce vomiting. If the person is conscious and alert, rinse their mouth and give them a small glass of water to drink. Never give anything by mouth to an unconscious person.

5. Handling and Storage

- **Handling:** Do not get in eyes, on skin, or on clothing. Use only in a well-ventilated area and avoid creating dust. Avoid breathing dust and the characteristic odor. Wear full personal protective equipment. Wash hands thoroughly after handling.
- **Storage:** Store in a cool, dry, well-ventilated location. Keep the container tightly sealed to protect from air and moisture, as the material is hygroscopic and oxidizes. Store away from incompatible materials, especially acids and oxidizing agents.

6. Exposure Controls/Personal Protection

- **Engineering Controls:** Use local exhaust ventilation to control airborne dust and odors. Emergency eyewash stations and safety showers must be readily accessible in the work area.
- **Personal Protective Equipment (PPE):**
    - **Eye/Face Protection:** Wear chemical splash goggles and a face shield to prevent any eye contact.
    - **Skin Protection:** Wear impervious chemical-resistant gloves (e.g., nitrile rubber) and protective clothing to prevent skin contact.
    - **Respiratory Protection:** If engineering controls are insufficient to maintain exposure below limits, a NIOSH-approved respirator with an appropriate cartridge for dusts and organic vapors should be used.
    - **General Hygiene:** Practice good industrial hygiene. Do not eat, drink, or smoke in handling areas. Wash hands before breaks and at the end of the shift.

7. Physical and Chemical Properties

- **Appearance:** White to slightly pink crystalline powder
- **Odor:** Unpleasant, sulfurous (rotten egg)
- **pH:** 6.5 - 7.5 (aqueous solution)
- **Melting Point:** Decomposes
- **Boiling Point:** Not applicable
- **Flash Point:** Not applicable
- **Solubility in Water:** Freely soluble
- **Molecular Weight:** 114.1 g/mol

8. Stability and Reactivity

- **Chemical Stability:** Stable under recommended storage conditions but is sensitive to air and moisture (hygroscopic and prone to oxidation).
- **Conditions to Avoid:** Exposure to air, moisture, heat, and direct sunlight.
- **Incompatible Materials:** Strong acids (liberates toxic hydrogen sulfide gas), strong bases, and strong oxidizing agents.
- **Hazardous Decomposition Products:** Thermal decomposition can release toxic gases such as oxides of sulfur, carbon monoxide, and carbon dioxide.
- **Hazardous Polymerization:** Will not occur.

9. Toxicological Information

- **Acute Toxicity:**
    - **Oral (LD50, Rat):** 50-200 mg/kg. Classified as toxic by ingestion.
- **Carcinogenicity:** This substance is not listed as a carcinogen by IARC, NTP, or OSHA.
- **Irritation:** Causes serious eye damage. May cause skin irritation.
- **Sensitization:** May cause an allergic skin reaction (skin sensitizer).

10. Disposal Considerations

- **Waste Disposal:** This material is considered a hazardous waste. Disposal must be conducted by a licensed professional waste disposal service in strict accordance with all applicable federal, state, and local regulations. Do not allow this material to enter sewer systems, surface waters, or groundwater. Contaminated packaging should be treated as hazardous waste.