

SAFETY DATA SHEET

24 Hour Emergency Phones

In U.S. Call CHEMTEL 1-800-255-3924

Outside U.S. call CHEMTEL Collect at:

1-813-248-0585

HMIS RATINGS: HEALTH: 2 FIRE: 1 REACTIVITY: 0 PERSONAL PROTECTION: F

SECTION 1: PRODUCT IDENTIFICATION

Product I.D.: 99940138
Product Name: SODIUM THIOSULFATE
Product Description: Powdered sodium thiosulfate
Chemical Name: Thiosulfuric acid (H₂S₂O₃), sodium salt
Chemical Family: Inorganic Sodium sulfate
CAS Number: 7772-98-7
Effective Date: June 26, 2008

SECTION 2: HAZARD IDENTIFICATION AND EMERGENCY OVERVIEW

Emergency Overview:

Unprotected contact may cause severe eye irritation and possibly burns, respiratory and skin irritation.

Eye Contact:

Depending on duration, unprotected contact may cause severe irritation, pain, burning, redness, swelling, change of vision, discoloration, watering, itching, stinging, possible injury or chemical burns to eyes, especially with heavy or prolonged contact or without immediate rinsing. Follow ALL supervisor and Personal Protection instructions in Section 8 of this SDS.

Skin Contact:

Depending on duration and individual sensitivity, unprotected, prolonged, excessive or repeated contact with product dust, liquid, mists or vapors may cause varying degrees of irritation, redness, inflammation, drying, cracking, or other effects. Repeated, long-term handling of some powdered or crystallized products without gloves may cause some abrasion of skin.

Inhalation:

Depending on duration of unprotected inhalation of product, vapors, mists, aerosols or dusts may cause mild irritation of the nose, throat, lungs and mucous membranes, shortness of breath, sneezing, cough, runny nose, nausea, headache and other effects. Prolonged or heavy exposure, or heating of liquid material may increase severity of symptoms.

Ingestion:

Depending on amount swallowed, product can cause mild irritation of mouth, throat, esophagus, stomach, and gastrointestinal tract, upset stomach, abdominal discomfort, nausea, vomiting, gastrointestinal disturbances, dizziness, diarrhea, and other effects. Aspiration into lungs during vomiting is an emergency and may cause lung injury and life-threatening conditions. Higher dose may increase irritation and severity of symptoms.

Medical Conditions Aggravated by Exposure:

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Improper protection allowing contact with vapors, mists, aerosols, liquids, splashes or dusts of product by inhalation, eye contact, or skin contact may aggravate pre-existing conditions or diseases of the respiratory system, skin, or eyes. Product containing solvents may aggravate Central Nervous System conditions or diseases. Individuals with above-noted conditions or known or suspected chemical sensitivities or allergies should avoid working with chemicals.

Skin Sensitization:

Not known to cause skin sensitization. With careful handling and when good chemical hygiene procedures are followed, harmful effects are not expected. As a precaution against unforeseen or unexpected sensitivity or possible allergic reactions, follow ALL Personal Protection instructions in Section 8 of this SDS.

Respiratory Sensitization:

Not known to cause respiratory sensitization. With careful handling and good chemical hygiene procedures being followed, no harmful effects are expected. As a precaution against unforeseen or unexpected sensitivity or possible allergic reactions, follow ALL Personal Protection instructions in Section 8 of this SDS. All PPE must be cleaned and maintained after each shift. All exposures should be avoided. Individuals known to be, or suspected to be sensitive to chemical exposure should not work with chemicals.

Special Warnings:

None for this material

Unusual Health Hazards:

None for this material

Supplemental Hazard Information

No additional information is currently available

Notes to Physician

Treat Symptomatically based on Section 2 Hazard Warnings and Section 3 ingredients unless indicated otherwise

Cancer Information:

*** Not known to contain carcinogens ***

SECTION 3: OSHA HAZARDOUS INGREDIENTS

| Component | CAS Number | Wt % | OSHA - PEL | ACGIH - TLV | Recommended PEL |
|--------------------|------------|--------|-----------------|-----------------|---|
| Sodium thiosulfate | 7772-98-7 | 99.00% | Not established | Not established | Lowest possible exposure or zero with best PPE. |

Important Notice:

Unprotected contact with Section 3 ingredients may be hazardous based on OSHA 29 CFR 1910.1200 & related appendices. Components not listed are trade secrets, non-hazardous, or not reportable. This SDS is not intended to offer full disclosure, but all component information is available to medical or emergency personnel. All hazards are based on contact exposure. Reducing or eliminating contact can reduce or eliminate risk. Use protective equipment and clothing in Section 8 to minimize or eliminate contact. Effects may be unpredictable and may vary from person to person due to individual reactions. Users are responsible for hazard determination and communication. Unless indicated otherwise, non-carcinogenic components are indicated within a 1-10% range, and investigated or potential carcinogens within a 0.1-1% range. HMIS ratings are based on data interpretation, and vary from company to company. They are intended only for quick, general identification of the degree of potential hazards. Hazards range from 0 (Minimal) up to 4 (Severe). Consult the National Paint & Coatings Association HMIS Manual for detailed information on ratings. To handle material safely, consider all information in this SDS.

SECTION 4: FIRST AID INSTRUCTIONS

Eye Contact:

Immediately rinse with flowing water for at least 15 minutes while holding eyelids open. Get immediate medical attention, as a precaution.

Skin Contact:

Immediately remove contaminated clothing. Wash affected area with soap and rinse with plenty of water. Get medical attention, as a precaution.

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Inhalation:

Immediately move person to fresh air. If breathing is difficult give oxygen, call 911, calm the individual. If not breathing, call 911, give artificial respiration (CPR) until medical help arrives. Have this Material Safety Data Sheet available.

Ingestion:

Do not induce vomiting unless directed to do so by a doctor or by other emergency medical personnel. Forced vomiting of certain chemicals may cause aspiration and lung damage. Have this Material Safety Data Sheet available.

SECTION 5: FIRE FIGHTING INSTRUCTIONS**Flash Point:**

Not applicable

Unusual hazards:

None expected

Other Hazards:

None known

Types of Extinguishers:

CO2, dry chemical, foam, water fog or spray depending on type of fire

Fire Fighting Directions:

Wear self-contained breathing equipment and fire-proof clothing. Use water spray to cool fire exposed containers if they cannot be safely moved.

SECTION 6: ACCIDENTAL SPILL OR RELEASE INSTRUCTIONS**Special Precautions:**

None known. Follow general precautions shown below.

Static Discharges:

Take precautionary measures against static discharges when cleaning up leaks or spills of powders, combustibles, or flammable liquids. Containers should be properly grounded with metal straps, cables or other appropriate means to relieve static electricity build-up or generation.

Environmental Protection:

Immediately dike liquid spills with inert absorbent material (sand, "Oil Dry" or other commercially available spill absorbent) to contain and soak up liquid. Prevent material from entering floor drains, sewers, or any bodies of water. For powder spills, use sweeping compound, sawdust, or other appropriate material to contain dust. If possible, recover any uncontaminated materials to re-use.

Protective equipment and clothing:

Wear all proper personal protective equipment and clothing to care for spill situation. See section 8 of this MSDS.

Clean up:

After containing liquid spill by diking and soaking up with inert absorbent material, place in labeled container to be sealed for proper and regulated disposal. Only the slightest residue should remain. Try to save uncontaminated material for reuse whenever possible. For powders, use sweeping compound to minimize dust and pick up as much product as possible. Do not allow liquids to seep into drains, sewers, lakes, rivers, etc. Check Sections 1 and 2 for dye description or type. Solvent dye residue may be cleaned by scrubbing with detergent, depending on type. Do not add water to water-soluble dyes. Dye is concentrated. This will increase amount of color to remove. All cleaning or scrubbing liquids used should be absorbed and placed in labeled containers for correct disposal. Absorbent material containing solvents may release combustible or flammable vapors and should be handled accordingly, properly labeled and disposed. Check Sections 2, 5, 13 & 15 for applicable instructions and regulations.

SECTION 7: HANDLING AND STORAGE**Warnings and Precautions:**

No special precautions anticipated. Wear all PPE in section 8 as a precaution, and avoid physical contact with material.

Personal Protection:

Wear ALL proper personal protective equipment as outlined in section 8 of this SDS.

Handling, Storage & Temperature Conditions:

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Keep containers tightly sealed in cool & dry area, out of direct sunlight. FOR PRODUCTS LISTING FLAMMABLE/COMBUSTIBLE SOLVENTS or LOW FLASH POINTS: Store away from fire hazards and ignition sources, high heat, open flames, welding, hot plates, steam pipes, radiators, etc. Maintain good ventilation. Guard against static discharges. Ground all containers before mixing or filling. Use non-sparking tools to open, close or otherwise work with containers. Limit indoor storage to approved areas with automatic sprinklers. Vapors expected to be released when material is heated during process operations.

General precaution for powders: Although unlikely in most instances, GUARD AGAINST DUST EXPLOSION HAZARD. Eliminate or keep dust to a minimum. Under the right conditions, high dust concentrations of certain particle sizes mixed with air in a critical ratio in the presence of an ignition source can theoretically cause a dust explosion.

At a minimum, follow all Section 8 recommendations for Exposure Controls and Personal Protection. FOR WATER-BASED PRODUCTS: DO NOT FREEZE. Also ground containers when filling or mixing powders.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Note: Selecting protective equipment & clothing:

When choosing personal protective equipment and clothing, consider each worker's environment, all chemicals being handled, temperature, ventilation, and all other conditions. Determination of the level of protection needed for the eyes, skin and respiratory system under working conditions is the responsibility of the product end-user or shift supervisor. SDS Sections 2, 3, 8 and 11 should be consulted.

Eye protection:

As a precaution, wear indirectly vented, splash-proof chemical safety goggles. When handling liquids, wear splash-proof goggles under a clear face-shield. Face shield is not to be used without these goggles. The type or extent of protection needed should be determined by the product end-user or shift supervisor.

Skin Protection:

Always wear impervious, chemical-resistant synthetic or rubber gloves. Check with manufacturer for best glove for the material being handled. Wear good quality long sleeved work shirt, coveralls, and a rubber or plastic apron. Wash hands after handling and before eating, drinking or using restroom. Shower after each shift. Clean contaminated but reusable protective equipment and clothing before reusing and wearing again. Discard contaminated disposable gloves and clothing. The type or extent of protection needed should be determined by the product end-user or shift supervisor.

Respiratory Protection:

Depending on type of material handled and processing conditions, it is recommended that an appropriate NIOSH approved organic vapor/mist respirator, or dust respirator (with proper filters as required) be worn when exposure to product is expected. After each shift or when equipment becomes contaminated, clean respirator and replace filters in compliance with 29 CFR 1910.134. The type or extent of protection needed should be determined by the product end-user or shift supervisor.

Eye Washes and Other Protection:

Eye wash stations and drench showers should be located within 100 feet or 10-second walk of the work area per ANSI standard Z358.1-1990.

Ventilation:

Local exhaust should be used to maintain exposure limits below specified amounts recommended by OSHA, NIOSH, or ACGIH and to draw spray, aerosol, vapors, or dusts away from workers and prevent routine inhalation. At least 10 air changes per hour are recommended for good room ventilation.

Airborne Exposure Limits:

Not referenced in literature

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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| | |
|---------------------------------|--|
| pH: | 8.6 (7.5% solution) |
| % Total VOC: | 0 |
| % Total Solids / Non-Volatiles: | 100 |
| Color: | Clear to white |
| Density: | Not established |
| Form: | Granules or crystals |
| Odor: | None |
| Freezing/Melting Point: | Not established |
| Specific Gravity: | 1.66 |
| Water Solubility: | Soluble. Test in specific formulations, applications and systems at applicable temperatures. |
| Solvent Solubility: | Not applicable |
| Other Properties: | No further data |
| Other Components: | Not established |
| Decomposition Temperature: | > 100°C |

All Data shown above are typical values, not specifications.

SECTION 10: STABILITY AND REACTIVITY

Stability:

Product is expected to be stable under normal, ambient (controlled) conditions concerning heat, moisture, pressure, fire and ignition hazards, and ventilation. Contact with incompatible or reactive materials may cause hazardous reactions in some products if indicated. Check information below.

Hazardous Polymerization:

Product will not undergo polymerization.

Conditions to Avoid:

- Temperatures > 100°C, moisture in storage, contact with incompatibles

Incompatible Materials:

Strong oxidizers, acids

Hazardous Decomposition Products:

Sulfur dioxide gas, hydrogen sulfide gas, sodium sulfide residue.

Possible Hazard Reactions:

Strong oxidizers cause vigorous exothermic reactions.
Acids release sulfur dioxide and/or hydrogen sulfide gas

SECTION 11: TOXICOLOGICAL INFORMATION

| | |
|----------------------------------|-----------------------------|
| Oral LD50 (Rat): | > 8000 mg/kg |
| Dermal LD50(Rabbit): | No data currently available |
| Eye Effects (Rabbit): | No data currently available |
| Skin Effects (Rabbit): | No data currently available |
| Mutagenicity: | No data currently available |
| Inhalation LC50 (Rat): | No data currently available |
| Skin Sensitization (Guinea Pig): | No data currently available |
| Respiratory Sensitization: | No data currently available |
| Additional Toxicity Data: | No data currently available |
| Supplemental Test Data: | No data currently available |
| Other Data: | No data currently available |

SECTION 12: ECOLOGICAL DATA

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BOD: No data currently available
COD: No data currently available
Aquatic Toxicity: No data currently available
Biodegradability: No data currently available
Persistence: No data currently available
Ecotoxicity: No data currently available
Sewage Treatment: No data currently available
Other Data: No additional data is available
Supplemental Test Data: No data currently available

SECTION 13: DISPOSAL AND ENVIRONMENTAL CONSIDERATION

Reuse of materials:

Reclaim all uncontaminated material to reuse, recycle or otherwise rework whenever possible.

Contain - Do not release:

Do not release into sewers, water systems, ground systems or ecosystems without proper authorization.

Disposal Methods:

Incinerate, treat, or bury (landfill), after sampling and testing, at facility approved by applicable federal, state, and local authorities.

Empty Containers:

Empty containers may contain residue and/or vapors and should not be reused unless professionally cleaned and reconditioned. Crush if not cleaned, to prevent reuse.

Applicable Regulations: See Section 15 if regulated

Special Instructions: See Section 15 if regulated

SECTION 14: SHIPPING AND TRANSPORTATION INFORMATION

DOT Regulations (Ground):

NOT REGULATED

IATA Regulations (Air):

NOT REGULATED

IMDG / IMO Regulations (Water):

NOT REGULATED

SECTION 15: REGULATORY INFORMATION

| Component | CAS Number | Weight % | Regulatory List |
|--------------------|------------|----------|-----------------|
| Sodium thiosulfate | 7772-98-7 | 99.00% | No references |

Regulatory List Reference:

NOTE: When no components are shown in space above this note, no federal or state reporting requirements apply to this product. When components are listed above, list numbers shown below indicate applicable regulations.*

List numbers

1-Accidental Release Substance

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- 2-CERCLA 304 Hazardous Substance (RQ)
- 3-Reserved
- 4-Clean Air Act-Sec. 111 Volatile Organic Compounds (VOC)
- 5-Clean Air Act-Sec. 112 Haz. Air Pollutant (HAP, HAP Code)
- 6-Clean Air Act-Ozone Depleting Chemical (ODC)
- 7-Clean Water Act-RQ
- 8-Clean Water Act-Priority Pollutant (PP) RQ
- 9-Marine Pollutant (MP)
- 10-PSM Highly Hazardous Chemical
- 11-RCRA Hazardous Waste (RCRA Code)
- 12-SARA 302 Extremely Hazardous Substance (EHS) (RQ)
- 13-SARA 313 Toxic Release Inventory (TRI) (TR Conc., TR Threshold)
- 14-SOCMI Chemical (CAA)
- 15-State Lists

CA-California Proposition 65, DE-Delaware, ID-Idaho, ME-Maine, MA-Massachusetts, MI-Michigan, MN-Minnesota, NJ-RTK New Jersey Hazardous Substance List, NJ-TCPA New Jersey Extremely Hazardous Substance List, NY-New York, PA-Pennsylvania, WA-Washington, WV-West Virginia, WI-Wisconsin

- 16-Supplemental regulatory information (SRI)

* Numbers shown immediately after a List Number indicate additional specific information. Examples: 2: 5000 (2 = CERCLA, 5000 = RQ), 11: D007 (11 = RCRA, D007 = Chromium)

Revised 011808 wln (Current list not applicable to previous Safety Data Sheets)

SARA 311/312 Hazard Categories:

| | |
|------------------------------------|-----|
| Immediate/Acute Health Hazard: | YES |
| Chronic/Delayed Hazard: | NO |
| Fire Hazard: | NO |
| Sudden Release of Pressure Hazard: | NO |
| Reactivity Hazard: | NO |

GLOBAL CHEMICAL REGISTRATION LISTINGS

| | |
|--------------------------|-----------------------------|
| AICS (Australia): | Status not determined |
| ASIA-PAC (Asia Pacific): | Status not determined |
| DSL (Canada): | Status not determined |
| ECL (Korea): | Status not determined |
| EINECS (Europe): | Status not determined |
| ENCS (Japan): | Status not determined |
| IECSC (China): | Status not determined |
| PICCS (Philippines): | Status not determined |
| TSCA (US): | Components listed or exempt |
| OTHER: | |

Supplemental Regulatory Information:

No additional information applies, or no supplemental information is available at this time.

Additional Info:

For additional international, federal or state regulatory compliance information not shown: Call 312-666-2015.

SECTION 16: OTHER INFORMATION

Reason for Revision: New SDS format
Reviewed: 062608 wln

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Disclaimer:

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200, and supersedes any previous information. Previously dated sheets are invalid and inapplicable.

END OF MSDS