



MATERIAL SAFETY DATA SHEET

SODIUM THIOSULFATE

MSDS NUMBER: EUSA-180
CURRENT ISSUE DATE: September, 2007
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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAMES: Secohypo™ Anhydrous and Sodium Thiosulfate Pentahydrate

OTHER/GENERIC NAMES: Sodium Thiosulfate Anhydrous, Sodium Hyposulfite; "hypo"; Sodium Thiosulfate Crystal; Prismatic Rice

PRODUCT USE: Photo processing, water treatment, waste treatment, paper manufacture, other industrial processes.

SUPPLIER:
Esseco USA LLC
Gatehall IV
4 Gatehall Drive
Parsippany, NJ 07054

FOR MORE INFORMATION CALL: 973-267-3330
(Monday-Friday, 9:00am-4:30pm)
FOR EMERGENCY IN USA, CALL CHEMTREC: 800-424-9300
(24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Odorless, clear to white crystals or granules which may irritate the skin and respiratory tract. May cause irritation and/or burns to the eyes. Reacts with acids to form toxic and irritating sulfur dioxide gas and/or hydrogen sulfide gas. Not flammable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>INGREDIENT NAME</u> | <u>CAS NUMBER</u> | <u>WEIGHT %</u> |
|------------------------------------|-------------------|-----------------|
| Sodium thiosulfate | 7772-98-7 | >98 |
| Or Sodium thiosulfate pentahydrate | 10102-17-7 | >99 |

Trace impurities and additional material names not listed above may appear in Section 15 of this MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

OSHA Hazard Communication Standard: *This product is considered hazardous under the OSHA Hazard Communication Standard.*

4. FIRST AID MEASURES

SKIN: Wash skin with plenty of soap and water. Get medical attention if irritation persists.
Launder contaminated clothing before reuse.

EYES: Flush eyes immediately with water for at least 15 minutes. Remove contact lenses if present after the first 5 minutes if you can do so easily and continue flushing. Get immediate medical attention.

INHALATION: Promptly remove to fresh air. If breathing is difficult, give oxygen, provided a qualified operator is available. If symptoms persist, get medical attention.



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INGESTION: If conscious, immediately rinse with water and give 1 glass of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.

ADVICE TO PHYSICIAN: Treat symptomatically.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

Material is not flammable. Use extinguishing media appropriate for material in surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None.

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Wear NIOSH-approved self-contained breathing apparatus to protect against any release of toxic and/or irritating fumes. Skin and eye protection should also be provided. Use water-spray to keep fire-exposed containers cool, and to knock down vapors and gases.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (See section 8 for recommended personal protective equipment.)

Promptly shovel or sweep up material with minimum dusting and shovel into an empty container with a cover. Clean spill area with plenty of water.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (See section 8 for recommended personal protective equipment.)

Avoid contact with skin, eyes and clothing. Do not breathe dust or mist. Use with adequate ventilation. Wash thoroughly after handling.

If dissolving and mixing solutions: with anhydrous material, the reaction is exothermic and the solution will retain heat; with the hydrate (crystal) material, the reaction is endothermic and the solution will cool.

STORAGE RECOMMENDATIONS:

Store in a cool, dry, well-ventilated area away from acids and oxidizing agents. Keep container closed when not in use and protect from physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide local exhaust if dusty or misty conditions exist or if there is a release of sulfur dioxide and/or hydrogen sulfide gas. Keep incompatible materials out of hoods, ducts, etc.



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PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:

For handling dry material, wear rubber gloves and full work clothing, including long-sleeved shirt and trousers. When handling solutions, wear impervious gloves and an apron. If contact with the solution is repeated and/or prolonged, wear full impervious clothing.

EYE PROTECTION:

Wear chemical safety glasses/goggles.

RESPIRATORY PROTECTION:

Where required, use a NIOSH-approved respirator for dust, mist, sulfur dioxide and/or hydrogen sulfide gas, as conditions indicate. If sulfur dioxide and/or hydrogen sulfide gas should be released, use a NIOSH-approved self-contained breathing apparatus or supplied-air respirator. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice.

ADDITIONAL RECOMMENDATIONS: Eyewash and safety shower are recommended.

EXPOSURE GUIDELINES

INGREDIENT NAME

No ingredients listed in this section.

ACGIH TLV -----

OSHA PEL -----

OTHER LIMIT -----

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Sulfur dioxide: OSHA TWA = 5 ppm;

ACGIH TLV = 2 ppm;

ACGIH STEL = 5 ppm.

Hydrogen sulfide: OSHA Ceiling (10 minute peak during 8hr shift) = 20 ppm;

ACGIH TLV = 10 ppm;

ACGIH STEL = 15 ppm.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

Clear to white granules or crystals.

PHYSICAL STATE:

Solid.

MOLECULAR WEIGHT:

158.11 (anhydrous)

248.18 (pentahydrate)

Na₂S₂O₃ (anhydrous)

Na₂S₂O₃ · 5H₂O (pentahydrate)

Odorless.

SPECIFIC GRAVITY (water = 1.0):

1.667 (anhydrous)

1.685 (pentahydrate)

33 @ 0° C (anhydrous)

52 @ 0° C (pentahydrate)

-8.6 (7.5% solution; anhydrous)

Not applicable.

48° C (pentahydrate)

Not applicable.

Not applicable.

Not applicable.

Not applicable.

Not flammable.

Not applicable

COMPARED TO:

Not applicable.

PH:

BOILING POINT:

MELTING POINT:

VAPOR PRESSURE:

VAPOR DENSITY (air = 1.0):

EVAPORATION RATE:

% VOLATILES:

FLASH POINT:

FLASH POINT METHOD:



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AUTOIGNITION TEMPERATURE: Not applicable
UPPER FLAME LIMIT (volume % in air): Not applicable
LOWER FLAME LIMIT (volume % in air): Not applicable
FLAME PROPAGATION RATE (solids): Not applicable
OSHA FLAMMABILITY CLASS: Not applicable

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):
Normally stable.

INCOMPATIBILITIES:

Strong oxidizers: causes vigorous exothermic reactions.
Acids: releases sulfur dioxide and/or hydrogen sulfide gas.

HAZARDOUS DECOMPOSITION PRODUCTS:

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

HAZARDOUS POLYMERIZATION:

Will not occur.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH HAZARDS

SKIN: Dust, solutions or mist may cause skin irritation from repeated or prolonged contact.

EYES: Dust, solutions or mist may irritate or burn the eyes and cause temporary conjunctivitis.

INHALATION: Inhalation of product dust or mist may irritate the respiratory tract. Contact with acids releases sulfur dioxide and/or hydrogen sulfide gas which may be harmful or deadly if inhaled.

INGESTION: Ingestion may cause irritation of the gastrointestinal tract and purging, if a large quantity is ingested. Relatively low in acute toxicity.

DELAYED EFFECTS: None known.

Ingredients found on one of the three OSHA designated carcinogen lists are listed below.

| <u>INGREDIENT NAME</u> | <u>NTP STATUS</u> | <u>IARC STATUS</u> | <u>OSHA LIST</u> |
|--|-------------------|--------------------|------------------|
| No ingredients listed in this section. | | | |

TOXICITY DATA:

Immediate (Acute) Effects:
Data not available.

Delayed (Subchronic and chronic) Effects:
Data not available.

Other Data:
None.



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SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME
No ingredients listed in this section.

COMMENT
....

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME
No ingredients listed in this section.

WEIGHT %
....

COMMENT
....

ADDITIONAL REGULATORY INFORMATION:

None

WHMIS CLASSIFICATION (CANADA):

D2B

FOREIGN CHEMICAL CONTROL INVENTORY STATUS:

Listed on Canadian DSL, Australian AICS, Philippines PICCS, Chinese IECSC, Japanese MITI, Korean KECL, and EU EINECS.

16. OTHER INFORMATION

CURRENT ISSUE DATE: September, 2007
PREVIOUS ISSUE DATE: September, 2004

CHANGES TO MSDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

Updated format, revised information in sections 3, 4, 5, 6, 8, 11, 12, 15 for updated information.

OTHER INFORMATION: This product is not for food or drug use.

The information in this Material Safety Data Sheet is believed to be accurate and reliable as of the date issued. Esseco USA makes no warranties, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose or course of performance or usage of trade. Accordingly, Esseco USA will not be responsible for damages resulting from use of or reliance upon this information. The user is responsible for determining whether the Esseco USA product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application on an Esseco USA product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Esseco USA product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.