



# SAFETY DATA SHEET

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December, 2013  
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## SODIUM THIOSULFATE

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Secohypo™ Anhydrous and Sodium Thiosulfate Pentahydrate

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

**PRODUCT USE AND RESTRICTIONS ON 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

#### GHS Classification

Not Classified as Hazardous

#### Label Elements:

None Required

### 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        | >98             |

Trace impurities and additional material names not listed above may appear in Section 15 of this SDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons. The exact concentrations are a trade secret.

### 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 medical attention if irritation occurs and persists.



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|                                                                                    |                                                                                                                                                                                             |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>INHALATION:</b>                                                                 | Promptly remove to fresh air. Get immediate medical attention if signs of suffocation, irritation or other symptoms develop.                                                                |
| <b>INGESTION:</b>                                                                  | If conscious, immediately rinse mouth 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. |
| <b>MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:</b>                         | May irritate the skin. May cause irritation to the eyes. May irritate the respiratory tract. Reacts with acids to form toxic and irritating sulfur dioxide gas.                             |
| <b>INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NEEDED:</b> | Treat symptomatically.                                                                                                                                                                      |

### 5. FIRE FIGHTING MEASURES

**SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA:**

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

**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:**

None known.

**SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTING:**

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

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:** Wear appropriate personal protective equipment.

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

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Promptly sweep up material with minimum dusting and shovel into an empty container with a cover. Clean spill area with plenty of water.

### 7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE 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.

**CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**

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.



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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### EXPOSURE GUIDELINES

| <u>INGREDIENT NAME</u>          | <u>ACGIH TLV</u> | <u>OSHA PEL</u> | <u>OTHER LIMIT</u> |
|---------------------------------|------------------|-----------------|--------------------|
| Sodium thiosulfate              | None             | None            | None               |
| Sodium thiosulfate pentahydrate | None             | None            | None               |

#### OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Sulfur dioxide: OSHA TWA = 5 ppm  
ACGIH STEL = 0.25 ppm

Hydrogen sulfide: OSHA 10 minute peak during 8hr shift = 50 ppm  
OSHA Ceiling = 20 ppm  
ACGIH TWA = 1 ppm  
ACGIH STEL = 5 ppm

#### APPROPRIATE ENGINEERING CONTROLS:

Local exhaust if dusty conditions exist or if there is a release of sulfur dioxide gas. Do not use in unventilated spaces, e.g., the holds of fishing boats, walk-in coolers or confined spaces.

#### INDIVIDUAL PROTECTION MEASURES, SUCH AS 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 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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                          |                                             |
|--------------------------|---------------------------------------------|
| <b>APPEARANCE:</b>       | Clear to white granules or crystals.        |
| <b>PHYSICAL STATE:</b>   | Solid.                                      |
| <b>ODOR:</b>             | Odorless.                                   |
| <b>ODOR THRESHOLD:</b>   | Not determined.                             |
| <b>MOLECULAR WEIGHT:</b> | 158.11 (anhydrous)<br>248.18 (pentahydrate) |



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|                                          |                                                                                                                                               |                              |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| CHEMICAL FORMULA:                        | Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (anhydrous)<br>Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> · 5H <sub>2</sub> O (pentahydrate) |                              |
| RELATIVE DENSITY (water = 1.0):          | 1.667 (anhydrous)<br>1.685 (pentahydrate)                                                                                                     |                              |
| SOLUBILITY IN WATER (weight %):          | 33 @ 0° C (anhydrous)<br>52 @ 0° C (pentahydrate)                                                                                             |                              |
| pH:                                      | ~8.6 (7.5% solution; anhydrous)                                                                                                               |                              |
| INITIAL BOILING POINT/RANGE:             | Not applicable.                                                                                                                               |                              |
| MELTING/FREEZING POINT:                  | 48° C (pentahydrate)                                                                                                                          |                              |
| VAPOR PRESSURE:                          | Not applicable.                                                                                                                               |                              |
| VAPOR DENSITY (air = 1.0):               | Not applicable.                                                                                                                               |                              |
| EVAPORATION RATE:                        | Not applicable.                                                                                                                               | COMPARED TO: Not applicable. |
| % VOLATILES:                             | Not applicable.                                                                                                                               |                              |
| PARTITION COEFFICIENT (N-OCTANOL/WATER): | Not determined.                                                                                                                               |                              |
| VISCOSITY:                               | Not applicable.                                                                                                                               |                              |
| FLASH POINT:                             | Not flammable.                                                                                                                                |                              |
| FLASH POINT METHOD:                      | Not applicable.                                                                                                                               |                              |
| AUTOIGNITION TEMPERATURE:                | Not applicable.                                                                                                                               |                              |
| UPPER FLAME LIMIT (volume % in air):     | Not applicable.                                                                                                                               |                              |
| LOWER FLAME LIMIT (volume % in air):     | Not applicable.                                                                                                                               |                              |
| DECOMPOSITION TEMPERATURE:               | Not determined.                                                                                                                               |                              |
| FLAMMABILITY (SOLID, GAS)                | Not flammable.                                                                                                                                |                              |
| OSHA FLAMMABILITY CLASS:                 | Not applicable.                                                                                                                               |                              |

### 10. STABILITY AND REACTIVITY

#### REACTIVITY:

Not normally reactive

#### CHEMICAL STABILITY:

Normally stable.

#### POSSIBILITY OF HAZARDOUS REACTIONS:

Reacts with acids to form toxic and irritating sulfur dioxide gas. Reacts with strong oxidizers to cause vigorous exothermic reactions.

#### CONDITIONS TO AVOID:

Avoid elevated temperatures.

#### 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.



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### 11. TOXICOLOGICAL INFORMATION

#### POTENTIAL HEALTH HAZARDS

##### ACUTE EFFECTS OF EXPOSURE:

- 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.

**CHRONIC 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. | ----              | ----               | ----             |

#### NUMERICAL MEASURES OF TOXICITY:

##### Immediate (Acute) Effects:

No data available

##### Delayed (Subchronic and Chronic) Effects:

None known

##### Other Data:

None

### 12. ECOLOGICAL INFORMATION

#### ECOTOXICITY:

The following ecotoxicity data is available for Sodium thiosulfate:

|                                 |             |
|---------------------------------|-------------|
| Daphnia magna LC50 48 hrs       | 520 mg/L    |
| Western Mosquitofish 96hrs LC50 | 24,000 mg/L |

#### PERSISTENCE AND DEGRADABILITY:

No data available

#### BIOACCUMULATIVE POTENTIAL:

No data available

#### MOBILITY IN SOIL:

No data available

#### OTHER ADVERSE EFFECTS:

No data available.



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### 13.DISPOSAL CONSIDERATIONS

#### RCRA

Is the unused product a RCRA hazardous waste if discarded? No

If yes, the RCRA ID number is: Not applicable.

#### OTHER DISPOSAL CONSIDERATIONS:

Dispose of in accordance with applicable Federal, State and Local regulations.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

### 14.TRANSPORT INFORMATION

US DOT HAZARD CLASS: Not regulated.  
US DOT ID NUMBER: Not applicable.  
PROPER SHIPPING NAME: Not applicable.

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

### 15.REGULATORY INFORMATION

#### TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: All components are listed on TSCA Inventory of Chemical Substances.  
OTHER TSCA ISSUES: None.

#### SARA TITLE III/CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

##### INGREDIENT NAME

No ingredients listed in this section.

##### SARA/CERCLA RQ (lb)

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##### SARA EHS TPQ (lb)

----

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee. Many states have more stringent regulations. Report all spills in accordance with local, state and federal regulations.

SECTION 311 HAZARD CLASS: Not Hazardous

#### 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

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### STATE RIGHT-TO-KNOW

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

| <u>INGREDIENT NAME</u>                 | <u>WEIGHT %</u> | <u>COMMENT</u> |
|----------------------------------------|-----------------|----------------|
| No ingredients listed in this section. | ----            | ----           |

### CALIFORNIA PROPOSITION 65

This product does not contain any ingredients known to the State of California to cause cancer and/or reproductive harm.

### 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: December, 2013

PREVIOUS ISSUE DATE: October, 2010

### CHANGES TO SDS FROM PREVIOUS ISSUE DATE ARE DUE TO THE FOLLOWING:

Updated format for HazCom 2012.

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.