1. Product and Company Identification

Material name: SODIUM THIOSULFATE PENTAHYDRATE
Version #: 02
Revision date: 08-30-2011
CAS #: 10102-17-7
Product Codes: J.T.Baker: 3945, 3946, 3951, 3960
Macron: 7763, 8100
Synonym(s): Sodium thiosulfate, pentahydrate; thiosulfuric acid, disodium salt, pentahydrate
Manufacturer: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway
Suite #200
Center Valley, PA 18034
US
Customer Service: 855-282-6867
24 Hour Emergency: 908-859-2151
Chemtrec: 800-424-9300

2. Hazards Identification

Emergency overview: Low hazard for usual industrial or commercial handling. Handle in accordance with good industrial hygiene and safety practice.

OSHA regulatory status: This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects:
- Routes of exposure: Inhalation. Skin contact. Eye contact. Ingestion.
- Eyes: Dust or powder may irritate eye tissue.
- Skin: Health injuries are not known or expected under normal use.
- Inhalation: Health injuries are not known or expected under normal use.
- Ingestion: Expected to be a low ingestion hazard. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Target organs: Eyes.
Chronic effects: None known.
Potential environmental effects: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

Non-hazardous components

<table>
<thead>
<tr>
<th>Material name</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM THIOSULFATE PENTAHYDRATE</td>
<td>10102-17-7</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

Composition comments: CAS # 10102-17-7 can be described by the CAS # 7772-98-7.

4. First Aid Measures

First aid procedures:
- Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if irritation develops or persists.
- Skin contact: Wash off with soap and water. Get medical attention if irritation develops or persists.
- Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
- Ingestion: Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Notes to physician
Treat symptomatically.

General advice
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties
This product is not flammable.

Extinguishing media
- Suitable extinguishing media
  Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media
  None known.

Protection of firefighters
- Protective equipment and precautions for firefighters
  Firefighters should wear full protective gear. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Ventilate the area. Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions
Prevent further leakage or spillage if safe to do so.

Methods for containment
If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up
Avoid dust formation.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Large Spills: Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airborne dust and prevent scattering by moistening with water.

Never return spills in original containers for re-use. Clean contaminated surface thoroughly. Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling
Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.

Storage
Keep containers tightly closed.

8. Exposure Controls / Personal Protection

Exposure guidelines
Not established.

Engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment
- Eye / face protection
  Use tight fitting goggles if dust is generated.
- Skin protection
  Wear appropriate clothing to prevent repeated or prolonged skin contact.
- Respiratory protection
  Wear respirator if there is dust formation.
- General hygiene considerations
  Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
### 9. Physical & Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Crystalline.</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless.</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid.</td>
</tr>
<tr>
<td>Form</td>
<td>Solid.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point</td>
<td>118.4 °F (48 °C)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 212 °F (&gt; 100 °C)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limits in air, upper, % by volume</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limits in air, lower, % by volume</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.75</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>248.19</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>Na2-O3-S2.5H2O</td>
</tr>
</tbody>
</table>

### 10. Chemical Stability & Reactivity Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td>Stable under normal temperature conditions. The substance is hygroscopic and will absorb water by contact with the moisture in the air.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Exposure to air. Exposure to moisture.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
</tbody>
</table>

### 11. Toxicological Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitization</td>
<td>Not a skin sensitizer.</td>
</tr>
<tr>
<td>Acute effects</td>
<td>Low hazard for usual industrial or commercial handling.</td>
</tr>
<tr>
<td>Local effects</td>
<td>May cause eye irritation.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>No epidemiological data is available for this product.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
<tr>
<td>Neurological effects</td>
<td>None known.</td>
</tr>
<tr>
<td>Reproductive effects</td>
<td>Contains no ingredient listed as toxic to reproduction</td>
</tr>
</tbody>
</table>
Teratogenicity

No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

Symptoms and target organs

Mild eye irritation.

12. Ecological Information

Ecotoxicological data

<table>
<thead>
<tr>
<th>Product</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM THIOSULFATE PENTAHYDRATE (10102-17-7)</td>
<td>LC50 Western mosquitofish (Gambusia affinis): 24000 mg/l 96.00 hours</td>
</tr>
</tbody>
</table>

Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

Not known.

Partition coefficient (n-octanol/water)

Not available

13. Disposal Considerations

Disposal instructions

Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated packaging

Offer rinsed packaging material to local recycling facilities. Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. CERCLA/SARA Hazardous Substances - Not applicable.

This product is not listed on the U.S. EPA TSCA Inventory. Under TSCA, hydrates are considered mixtures of their anhydrous salt and water. Accordingly, the anhydrous form is subject to TSCA reporting requirements.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Immediate Hazard - No
- Delayed Hazard - No
- Fire Hazard - No
- Pressure Hazard - No
- Reactivity Hazard - No

Section 311 hazardous chemical

- No

Food and Drug Administration (FDA)

- Total food additive
- Direct food additive
- GRAS food additive

Material name: SODIUM THIOSULFATE PENTAHYDRATE
MSDS ID: S5230  Version #: 02  Revision date: 08-30-2011
## Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)*

### State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

### Saf-T-Data

- **Health**: 1 - Slight
- **Flammability**: 0 - None
- **Reactivity**: 1 - Slight
- **Contact**: 1 - Slight
- **Lab Protective Equip**: C - GOGGLES; LAB COAT; PROPER GLOVES
- **Storage Color Code**: G - Green (General Storage)

## 16. Labeling Info

### Label Hazard Warning

Low hazard for usual industrial or commercial handling. Handle in accordance with good industrial hygiene and safety practice.

### Label Precautions

Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Keep container closed.

### Label First Aid

Immediately flush eyes with plenty of water for at least 15 minutes. Flush skin thoroughly with water. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. If ingestion of a large amount does occur, call a poison control center immediately.

## 17. Other Information

### NFPA ratings

- **Health**: 1
- **Flammability**: 0
- **Instability**: 0
Disclaimer

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Issue date

08-30-2011