1. Product and Company Identification

Product Identifier: 0.5% SOB
Product Name: Sulfur Oxidizing Broth
Relevant identified uses of the substance or mixture and uses advised against: Detection of certain species of Sulfur Oxidizing Bacteria (SRB).
Manufactured by: Biotechnology Solutions USA, LLC.
10516 Kipp Way, Suite B
Houston, TX 77099
Telephone Number: 1 (281) 531-5319

2. Hazards Identification

Product Overview:
Caution! May cause eye, skin, and respiratory tract irritation. This is expected to be a low hazard for usual industrial handling. No target organ information has been found.

Appearance: Light purple  Physical State: Liquid  Odor: Slight odor

GHS Classification:
Other Safety Precautions:
Not a dangerous substance according to GHS classification criteria.
No known OSHA hazards.
May cause eye irritation.
Preexisting eye disorders
May cause irritation to skin.
Skin Disorders.
May cause gastrointestinal discomfort.
May cause irritation to respiratory tract.

Environmental Hazard: See section 12 for additional Ecological Information

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>% (w/v)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium Sulfate</td>
<td>10034-99-8</td>
<td>&lt; 1.0</td>
</tr>
<tr>
<td>Sodium Thiosulfate Pentahydrate</td>
<td>10102-1-7</td>
<td>&lt; 1.0</td>
</tr>
<tr>
<td>Ferrous Sulfate Heptahydrate</td>
<td>7782-63-0</td>
<td>&lt; 1.0</td>
</tr>
<tr>
<td>Ammonium Sulfate</td>
<td>77783-20-2</td>
<td>&lt; 1.0</td>
</tr>
<tr>
<td>Calcium Chloride Dihydrate</td>
<td>10035-04-8</td>
<td>&lt; 1.0</td>
</tr>
<tr>
<td>Monopotassium Phosphate</td>
<td>7778-77-0</td>
<td>&lt; 1.0</td>
</tr>
<tr>
<td>Bromophenol Blue</td>
<td>115-39-9</td>
<td>&lt; 1.0</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>7647-14-5</td>
<td>&lt; 1.0</td>
</tr>
</tbody>
</table>

Formula: Mixture - This product does not contain any harmful or hazardous substances
4. First Aid Measures

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.

Skin Contact: Wash with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops.

Inhalation: Not a common route of exposure.

Ingestion: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Rinse mouth. Give plenty of water if conscious.

5. Fire Fighting Measures

Flammable Properties: Not Flammable
Flash Point: >200°F/ >93.3°C
Auto-ignition Temperature: Not available
Explosion Limits: Lower: Not available Upper: Not available
Hazardous Combustion Products: Carbon Oxides
NFPA Rating: Health: 0; Flammability: 0; Instability: 0; Physical Hazard 0

HMIS Rating:

<table>
<thead>
<tr>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

6. Accidental Release Measures

Personal Precautions: Use personal protective equipment. Avoid contact with the skin and the eyes. Ensure adequate ventilation.

Environmental precautions: Wipe up with damp sponge or mop.
Methods for Containment: Dike far ahead of liquid spill for later disposal.
Methods for Cleaning Up: Soak up with inert absorbent material. Transfer to properly labeled containers.
Reference to other sections:

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. Handling and Storage

Handling: Wear personal protective equipment.
Precautions for safe handling: No special measures required.
Storage: Keep in a cool, ventilated place. Keep away from strong acids and oxidizers.
Explosion and fire information: No special measures required.
Additional storage information: None.

8. Exposure Controls/ Personal Protection

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures: Remove and wash contaminated clothing before re-use. Wash hands before breaks and immediately after handling the product.

Engineering Measures: Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Personal Protective Equipment
Eye/Face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and Body Protection Wear appropriate protective gloves and clothing to prevent skin exposure.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light purple</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>pH</td>
<td>3.9 - 4.6</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;200° F/ &gt;93.3°C</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in Water</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Density</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Stability Stable under recommended storage conditions.

Incompatible Products Oxidizing agents, acids, bases.

Conditions to Avoid Extreme temperatures, humidity and acidic conditions.

Hazardous Decomposition Products Carbon oxides, mild acids.

Hazardous Polymerization None under normal processing.

11. Toxicological Information

Acute Toxicity
Product Information The product itself has not been tested.
Irritation May cause irritation to eyes

Chronic Toxicity
Chronic Toxicity Prolonged exposure may cause chronic effects.

Target Organ Effects Eyes, Skin

12. Ecological Information

Ecotoxicity The environmental impact of this product has not been fully investigated.

13. Disposal Considerations

Waste Disposal Method Dispose of in accordance with local regulations.
Contaminated Packaging Dispose of in accordance with local regulations.

14. Transport Information

DOT Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory Information U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute Health Hazard No
Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard  No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulations
California Proposition 65  This product does not contain any Proposition 65 chemicals

International Regulations
Mexico - Grade  No information available.
Canada  No information available.

WHMIS Hazard Class  Not determined

16. Other Information

Issuing Date  1-Mar-2010  Printing Date  7-Sep-17

Disclaimer
The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet