**Identification of the substances/mixture and of the company/undertaking**

**1.1 Product Identifiers**
- **Product Number**: M789
- **Product Name**: Thiobacillus Broth
- **REACH Registration Number**: This product is a mixture. Reach registration number is not available for this mixture.

**1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Relevant identified uses**: Laboratory Chemicals, Analytical Purpose, Biochemical Analysis

**1.3 Details of the supplier of the safety data sheet**
- **Produced by**: HiMedia Laboratories Private Limited
- **Address**: 23, Vadhani Industrial Estate, LBS Marg, Ghatkopar (W), Mumbai - 400 086, India
- **Tel. No.**: +91-22-2500 0970, +91-22-2500 1607
- **Fax No.**: +91-22-25002468
- **Mail Id**: info@himedialabs.com
- **Website**: www.himedialabs.com

**1.4 Emergency Tel. No.**
- **Emergency Tel. No.**: Please contact the regional HiMedia representation in your country

---

**2 Hazards Identification**

**2.1 Classification of the substance or mixture**
- **CLP Classification-Regulation (EC) No. 1272/2008 [EU-GHS/CLP]**
  Not a hazardous substance or mixture according to Regulation (EC) No.1272/2008.

**2.2 Label elements**
- **Labeling according to Regulation (EC) No.1272/2008**
  The product does not need to be labelled in accordance with EC directives or respective national laws.

**2.3 Other Hazards**
- None

---

**3 Composition/Information On Ingredients**

**3.2 Mixture**

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride, anhydrous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS No.: 10043-52-4</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=1.0 - &lt;=10.0%</td>
</tr>
<tr>
<td>EC No.: 233-140-8</td>
<td>Eye Irrit. 2A H319</td>
<td></td>
</tr>
<tr>
<td>Component</td>
<td>Classification</td>
<td>Concentration</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Ferrous sulphate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.1 - &lt;=1.0%</td>
</tr>
<tr>
<td>CAS No. : 7720-78-7</td>
<td>Acute Tox. oral 4; Skin Irrit. 2; Eye Irrit.</td>
<td></td>
</tr>
<tr>
<td>EC No. : 231-753-5</td>
<td>2A H302; H315; H319</td>
<td></td>
</tr>
<tr>
<td>Index-No : 026-003-00-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular Formula : FeSO₄</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Refer Section 16 for complete statement of H codes and its classification.

4 First Aid Measures
4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of immediate medical attention and special treatment needed
No data available.

5 Fire Fighting Measures
5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media
No data available.

5.2 Special hazards arising from the substance or mixture
Sodium Oxides, Hydrogen chloride gas, Potassium oxides, Oxides of phosphorus, Magnesium oxides, Sulphur oxides, Calcium oxide

5.3 Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary

5.4 Further information
No data available

6 Accidental Release Measures
6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert adsorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see Section 13.

7 Handling and Storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended Storage Temperature: On receipt store between 10-30°C

7.3 Specific end uses
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure Controls/Personal Protection

8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the products.

Personal protective equipment
Hygiene measure
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with the product.

Eye/face protection
Tightly fitting safety goggles; Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425/EEC and the standard EN ISO 374-1/2016 derived from it.

Body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to
engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Environment exposure controls**
Do not empty into drains.

### 9 Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White to Cream coloured homogenous free flowing powder</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (Solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### 9.2 Other safety information

No data available

### 10 Stability and Reactivity

#### 10.1 Reactivity

No data available

#### 10.2 Chemical stability

No data available

#### 10.3 Possibility of hazardous reactions

No data available

#### 10.4 Conditions to avoid

No data available

#### 10.5 Incompatible materials

No data available

#### 10.6 Hazardous decomposition products

Refer Section 5.2. Other Decomposition products not known.
11    Toxicological Information
11.1 Information on toxicological effects

Acute toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available

Specific target organ toxicity- single exposure
No data available

Aspiration hazard
No data available

Potential Health Effects

Inhalation
REFER SECTION 2

Skin
REFER SECTION 2

Eyes
REFER SECTION 2

Ingestion
REFER SECTION 2

11.2 Components

Calcium chloride

Acute oral toxicity
Rat LD50 : 1,000 mg/kg
(As per IUCLID)

Acute dermal toxicity
Rat LD50 : 2,630 mg/kg
(As per IUCLID)

Skin irritation
Rabbit
Result : No irritation
(As per OECD Test Guideline 404)

Eye irritation
Rabbit
Result: Eye irritation
(As per OECD Test Guideline 405)
Causes serious eye irritation.
**Additional Information**
RTECS: EV9800000

**Ferrous sulphate**
*Acute Oral Toxicity*
Mouse LD50: 1.520 mg/kg

**Additional Information**
RTECS: NO8510000

---

12  **Ecological Information**

12.1  **Toxicity**
No data available

**Components**

**Calcium chloride**
*Toxicity to fish*
Lepomis macrochirus (Bluegill sunfish) LC50 : 10,650 mg/l; 96 h
(As per IUCLID)

*Toxicity to daphnia and other aquatic invertebrates*
Daphnia magna (Water flea) EC50 : 144 mg/l; 48 h
(As per IUCLID)

*Toxicity to algae*
AlgaeIC50 : 3,130 mg/l; 120 h
(As per IUCLID)

**Components**

**Ferrous sulphate**
*Toxicity to fish*
Brook trout (Salvelinus fontinalis) LC 50: 0.41 mg/l ; 96h

*Toxicity to daphnia and other aquatic invertebrates*
Water flea (Daphnia magna) EC 50: 6.15 mg/l; 48h

12.2  **Persistence and degradability**
No data available

12.3  **Bioaccumulative potential**
No data available

12.4  **Mobility in soil**
No data available

12.5  **PBT and vPvB assessment**
This substance or mixture contains no components considered to be persistent, bioaccumulating nor toxic (PBT) at levels of 0.1% or higher.

12.6  **Other adverse effects**
No data available
13 Disposal Considerations

13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced company. Contact a licenced professional waste disposal service to dispose off this material.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information

14.1 UN-No
ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.2 UN proper shipping name
ADNR : Not dangerous goods
ADR : Not dangerous goods
IATA_C : Not dangerous goods
IATA_P : Not dangerous goods
IMDG : Not dangerous goods
RID : Not dangerous goods

14.3 Transport hazard class(es)
ADNR : -
ADR : -
IATA_C : -
IATA_P : -
IMDG : -
RID : -

14.4 Packaging group
ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.5 Environmental hazards
ADNR : No ADR : No IMDG : Marine Pollutant No IATA_C : No IATA_P : No RID : No

14.6 Special precautions for use
No data available

15 Regulatory Information
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

15.1 Safety health and environment regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
No data available

16 Other information

H302 Harmful if swallowed
H315 Causes skin irritation
H319 Causes serious eye irritation
Acute Tox.oral 4 Acute toxicity, oral, Category 4
Eye Irrit. 2A Serious eye damage or eye irritation, Category 2A
Further Information

Copyright 2016 HiMedia Laboratories Pvt. Ltd.
The information given in this safety data sheet is believed to be correct yet does not claim to be all inclusive. This document is intended only as a guide for appropriate precautionary handling of the material by properly trained individuals, information here being commensurate with the present state of our knowledge regarding the manner and conditions of use, handling, storage or disposal. The information provided herein shall not be considered as guarantee of the properties of the product. HiMedia Laboratories, shall not be held liable for any damage resulting from improper handling or contact with the above product. Unless explicitly stated on the product or in any of the documentation accompanying the product, it is intended for research or testing purpose only and is not to be used for any other purpose.