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

1.1 Product Identifiers
   - Product Number: M1561
   - Product Name: BAT Medium
   - 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
   1.2.1 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: 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.

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>Boric acid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS No. :</td>
<td>10043-35-3</td>
<td>As Per EC Regulation 1272/2008</td>
</tr>
<tr>
<td>EC No. :</td>
<td>233-139-2</td>
<td>Repr.Tox. 1A, 1B H360</td>
</tr>
<tr>
<td>Index-No :</td>
<td>005-007-00-2</td>
<td>&gt;=0.0001 - &lt;=0.001%</td>
</tr>
</tbody>
</table>

Page 1 of 10
Calcium chloride, anhydrous  
CAS No. : 10043-52-4  
EC No. : 233-140-8  
As Per EC Regulation 1272/2008  
Eye Irrit. 2A  H319  
>=1.0 - <=10.0%

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
</table>
| Copper sulphate| **As Per EC Regulation 1272/2008**  
Acute Tox. oral 4; Skin Irrit. 2; Eye Irrit. 2A; Aquatic Chronic 1  H302; H315; H319; H410  
**As Per EC Directive 67/548/EEC or 1999/45/EC**  
Xn; Xi; N  R22; R36/38; R50/53 | >=0.001 - <=0.01% |
| Manganese sulphate| **As Per EC Regulation 1272/2008**  
STOT RE 2; Aquatic Chronic 2  H373; H411 | >=0.001 - <=0.01% |
| Zinc sulphate  | **As Per EC Regulation 1272/2008**  
Eye Dam. 1; Aquatic Chronic 1  H318; H410 | >=0.001 - <=0.01% |

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

4  
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
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
   Carbon oxides, Calcium oxides, Sodium oxides, Hydrogen chloride gas, Potassium oxides, Oxides of phosphorus, Sulphur oxides
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 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 89/686/EEC and the standard EN 374 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.

---

### Physical and chemical properties

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Cream to yellow coloured homogeneous free</td>
</tr>
<tr>
<td></td>
<td>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>3.80 - 4.20</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

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

**Additional Information**

RTECS: No data available

---

### 11.2 Components

**Boric Acid**

*Acute Toxicity*

Rat oral LD50: 2660 mg/kg  
Rabbit dermal LD50: 2000 mg/kg  
Mouse Oral: LD50 = 3450 mg/kg.

*Additional information*

RTECS: ED4550000  
Specific concentration limits (SCL): >5.5%  
Boric acid is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)

**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

---

**Copper sulphate**

*Acute oral toxicity*

Rat LD50: 482 mg/kg  

*Acute dermal toxicity*

Rat LD50: >2000 mg/kg

*Skin irritation*

Rabbit Result: Non irritant

*Eye irritation*

Rabbit Result: Highly irritating

*Skin sensitization*
Guinea pig Result: Non sensitizing

Genetic toxicity (in-vitro)
Ames test
Result: Negative (As Per OECD Test Guideline 471)

Genetic toxicity (in-vivo)
Mouse Micronucleus assay
Result: Negative

Carcinogenicity
Rat Result: Negative

Toxicity to Reproduction
No data available

Teratogenicity
No data available

Additional information:
RTECS: GL8800000

Manganese sulphate
Acute oral toxicity
Rat LD50: 2,150 mg/kg
(As per IUCLID)

Acute Dermal Toxicity
Rat LD50: Not determined.

Acute Inhalation Toxicity
Rat LC50: > 4.45 mg/l
(As per OECD Test Guideline 403)

Additional Information
RTECS: OP1050000

Zinc Sulphate, Heptahydrate
Acute Oral Toxicity
Rat LD50: 1,260 mg/kg (As Per RTECS)

Additional information
RTECS: ZH5300000

12 Ecological Information
12.1 Toxicity
No data available

Component
Boric Acid
Toxicity to fish
Gambusia affinis LC50: 5600 mg/l
Rainbow trout LC50: 150mg B/L; 24d
Goldfish LC50: 46mg; 7d

Toxicity to daphnia and other aquatic invertebrates
Daphnia EC50: 115 mg/l
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
Algae IC50 : 3,130 mg/l; 120 h
(As per IUCLID)

Component:

Copper sulphate

Toxicity to fish
Oncorhynchus mykiss Flow through test LC50: 200 µg/L; 96 h

Toxicity to aquatic invertebrates
Daphnia magna (Water flea) Static test LC50: 7 µg/L; 48 h

Toxicity to aquatic alga and cyanobacteria
Phaeodactylum tricornutum Static test EC10: 2.9 µg/L; 72 h

Toxicity to terrestrial arthropods
Folsomia fimetaria EC10 : 688 mg/kg; 21 d

Components

Manganese sulphate

Toxicity to fish
Onchorhynchus mykiss (Rainbow trout) LC50 : 14.5 mg/l; 96 h.
Pimephales promelas (fathead minnow) LC50 : 30.6 mg/l; 96 h.

Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50 : 8.3 mg/l; 48 h.

Acute Toxicity to Aquatic Plants
Desmodesmus subspicatus (algae) EC50 61 mg/l; 72 h
(As per OECD Test Guideline 201)

Components

Zinc Sulphate, Heptahydrate

Toxicity to fish
Onchorhynchus mykiss (rainbow trout) LC50: 0.1 mg/l; 96 h
(As Per ECOTOX Database)

Toxicity to algae
Scenedesmus quadricuadu (green algae) IC50: 0.52 mg/l; 5 d
(As Per IUCLID)

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential
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
H318 Causes serious eye damage
H319 Causes serious eye irritation
H360 May damage fertility or the unborn child
H373 May cause damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects
H411 Toxic to aquatic life with long lasting effects
Acute Tox. oral 4 Acute toxicity, oral, Category 4
Aquatic Chronic 1 Hazardous to the aquatic environment, long term hazard, Category 1
Aquatic Chronic 2 Hazardous to the aquatic environment, long term hazard, Category 2
Eye Dam. 1 Serious eye damage or eye irritation, Category 1
Eye Irrit. 2A Serious eye damage or eye irritation, Category 2A
Repr. Tox. 1A, 1B Reproductive toxicity, Category 1A, 1B
Skin Irrit. 2 Skin corrosion or irritation, Category 2
STOT RE 2 Specific target organ toxicity, repeated exposure, Category 2
R22 Harmful if swallowed.
R36/38 Irritating to eyes and skin.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse. Effects in the aquatic environment.
N Dangerous for the environment
Xi Irritant
Xn Harmful

Further Information

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