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

1.1 **Product Identifiers**
- **Product Number**: M642
- **Product Name**: Lysine Medium Base
- **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-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>&gt;=0.1 - &lt;=1.0%</td>
</tr>
<tr>
<td>CAS No.:</td>
<td>10043-52-4</td>
<td></td>
</tr>
<tr>
<td>EC No.:</td>
<td>233-140-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>As Per EC Regulation 1272/2008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eye Irrit. 2A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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>Boric acid</td>
<td>As Per EC Regulation 1272/2008</td>
<td>- &lt;=0.01%</td>
</tr>
<tr>
<td>CAS No. :</td>
<td>10043-35-3</td>
<td></td>
</tr>
<tr>
<td>EC No. :</td>
<td>233-139-2</td>
<td></td>
</tr>
<tr>
<td>Index-No:</td>
<td>005-007-00-2</td>
<td></td>
</tr>
<tr>
<td>Zinc sulphate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>- &lt;=0.01%</td>
</tr>
<tr>
<td>CAS No. :</td>
<td>7446-19-7</td>
<td></td>
</tr>
<tr>
<td>EC No. :</td>
<td>231-793-3</td>
<td></td>
</tr>
<tr>
<td>p-Amino benzoic acid (PABA)</td>
<td>As Per EC Regulation 1272/2008</td>
<td>- &lt;=0.01%</td>
</tr>
<tr>
<td>CAS No. :</td>
<td>150-13-0</td>
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</tr>
<tr>
<td>EC No. :</td>
<td>205-753-0</td>
<td></td>
</tr>
<tr>
<td>Nicotinic acid</td>
<td>As Per EC Regulation 1272/2008</td>
<td>- &lt;=0.01%</td>
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<tr>
<td>CAS No. :</td>
<td>59-67-6</td>
<td></td>
</tr>
<tr>
<td>EC No. :</td>
<td>200-441-0</td>
<td></td>
</tr>
<tr>
<td>Ferrous sulphate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>- &lt;=0.01%</td>
</tr>
<tr>
<td>CAS No. :</td>
<td>7720-78-7</td>
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</tr>
<tr>
<td>EC No. :</td>
<td>231-753-5</td>
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<tr>
<td>Index-No :</td>
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<td></td>
</tr>
<tr>
<td>Molecular Formula :</td>
<td>FeSO₄</td>
<td></td>
</tr>
</tbody>
</table>

Refer Section 16 for complete statement of H codes and its classification.
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**
Carbon oxides, Potassium oxides, Oxides of phosphorus, Magnesium oxides, 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 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, 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>4.80 - 5.20</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>
</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**

**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

**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)

**Nalidixic acid**

*Acute Oral Toxicity*
Rat LD50 :2040mg/kg
Mouse LD50 :572mg/kg
Acute Intraperitoneal Toxicity
Rat LD50: 319 mg/kg
Mouse LD50: 600 mg/kg

Acute Intravenous Toxicity
Rat LD50: 1160 mg/kg
Mouse LD50: 101 mg/kg

Acute Dermal Toxicity
Rat LD50: 1584 mg/kg
Mouse LD50: 500 mg/kg

Additional Information
RTECS: QN2885000

PABA (Para aminobenzoic acid)(4-aminobenzoic acid)

Acute oral toxicity
Rat LD50: 6gm/kg(RTECS)
Mouse LD50: 2850mg/kg
Rabbit LD50: 1830 mg/kg
Dog LD50: 1000 mg/kg

Acute inhalation toxicity
No data available

Acute dermal toxicity
No data available

Skin irritation
No data available

Eye irritation
No data available

Sensitisation
STOT: May cause respiratory irritation

Genetic toxicity (in-vitro)
Ames Test
Negative (National Toxicological Program)
Germ cell mutagenicity

Mouse
Causes DNA damage
Carcinogenicity
IARC Group 3 (It is not established as carcinogen to humans)

Toxicity to Reproduction
No data available

Teratogenicity
No data available

Additional information:
RTECS: No data available

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

Additional Information
RTECS: NO8510000

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
AlgaeLC50 : 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

Components
PABA (Para aminobenzoic acid) (4-aminobenzoic acid)
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50 : 546 mg/l; 24 h.
Toxicity to Bacteria
Microtox test
Phytobacterium phosphoreum EC50: 27.4 mg/l; 30 mins.

Components
Niacin(Nicotinic acid)
Toxicity to fish
Brown trout (Salmo Trutta Fario)LC50: 520 mg/l; 96 h(ECHA)
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna EC50: 77 mg /L; 48 h(ECHA)

Toxicity to algae
Desmodesmus subspicatus Scenedesmus subspicatus
EC50: 89.93 mg/L 72 h(ECHA)

Toxicity to microorganisms
Pseudomonas putida EC50: 120 mg /L; 16 h(ECHA)
Pseudomonas putida EC10: 88 mg /L; 16 h(ECHA)

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
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
H317        May cause an allergic skin reaction
H318        Causes serious eye damage
H319        Causes serious eye irritation
H360        May damage fertility or the unborn child
H410        Very 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
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
Skin Sens. 1        Sensitisation, Skin, Category 1

Further Information

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