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

1.1 Product Identifiers
Product Number: TC150
Product Name: D- (+)- Mannose, Cell Culture Tested
CAS No.: 3458-28-4
EC No.: 222-392-4

1.2 Relevant identified uses of the substance or mixture and uses advised against
1.2.1 Relevant identified uses
Laboratory chemicals, Manufacture of substances

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
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other Hazards
none

3 Composition/Information On Ingredients

3.1 Substances
Molecular Formula: C₆H₁₂O₆
Molecular Weight: 180.16
CAS No.: 3458-28-4
EC No.: 222-392-4
No components need to be disclosed according to the applicable regulations.

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
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

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

If swallowed
Do NOT induce vomiting. 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
The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

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

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. Discharge into environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). 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 dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Recommended Storage Temperature: Below 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
Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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
Faceshield and safety goggles.
Skin protection
Handle with gloves.
Body protection
Complete suit protecting against chemicals.
Respiratory protection
Air-purifying respirators.
Environment exposure controls
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9 Physical and chemical properties
9.1 Information on basic physical and chemical properties
Appearance White to off-white crystals or powder.
Odour No data available
Odour Threshold No data available
pH No data available
Melting/freezing point No data available
Initial boiling point and boiling range No data available
Flash point No data available
Upper/lower flammability or explosive limits: No data available
Evaporation rate: No data available
Flammability (Solid, gas): No data available
Vapour pressure: No data available
Relative density: No data available
Water Solubility: No data available
Partition coefficient: n-octanol/water: No data available
Autoignition Temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Vapour density: No data available
Thermal decomposition: No data available

9.2 Other safety information
No data available

10 Stability and Reactivity
10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
Strong oxidizing agents
10.6 Hazardous decomposition products
Other decomposition products - refer section 5.2.
In the event of fire - refer section 5.

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

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**Additional Information**
RTECS: Not available

<table>
<thead>
<tr>
<th>12</th>
<th>Ecological Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1</td>
<td>Toxicity</td>
</tr>
<tr>
<td></td>
<td>No data available</td>
</tr>
</tbody>
</table>

| 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 |
|      | PBT and vPvB assessment not available Chemical safety assessment is not required |

| 12.6 | Other adverse effects |
|      | Discharge into the environment must be avoided. |

<table>
<thead>
<tr>
<th>13</th>
<th>Disposal Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.1</td>
<td>Waste treatments methods</td>
</tr>
<tr>
<td></td>
<td><strong>Product</strong></td>
</tr>
<tr>
<td></td>
<td>Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustive solvent and burn in chemical incinerator equipped with an afterburner and scrubber.</td>
</tr>
</tbody>
</table>

| 13.2 | Contaminated packaging |
|      | Dispose of as unused product. |

<table>
<thead>
<tr>
<th>14</th>
<th>Transport Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1</td>
<td><strong>UN-No</strong></td>
</tr>
<tr>
<td></td>
<td>ADNR: ADR: IATA_C: IATA_P: IMDG: RID:</td>
</tr>
</tbody>
</table>

| 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 datasheet 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

Further Information

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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.