Material Safety Data Sheet

Revision: 02
Date of Revision: 15.07.2013

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

1.1 Product Identifiers
Product Code RM1122
Product Name Indium (III) oxide, Extra pure

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

1.3 Details of the supplier of the safety data sheet
Produced by HiMedia Laboratories Pvt. Ltd.
Address 23, Vadhani Indl.Estate, LBS Marg, Mumbai 400 086, India.
Tel. No. +91-22-2500 0970, +91-22-2500 1607
Fax No. +91-22-2500 2468

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
Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 2A)
Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Irritating to eyes, respiratory system and skin.

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008 [CLP]
Pictogram

Signal word Warning

Hazard Statement(s)
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary Statement(s)
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.


Symbol(s)
R-Phrase(s)
R36/37/38 Irritating to eyes, respiratory system and skin.
S-Phrase(s)
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing.

2.3 Other hazards - none

3. Composition/Information on Ingredients

3.1 Substances
Synonym: Diindium trioxide; Indium sesquioxide

Molecular Formula: \( \text{In}_2 \text{O}_3 \)
Molecular Weight: 277.63

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indium (III) oxide, Extra pure</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>1312-43-2</td>
</tr>
<tr>
<td>EC-No.</td>
<td>215-193-9</td>
</tr>
</tbody>
</table>

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 thoroughly with plenty of water for at least 15 minutes and 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.

5.2 Special hazards arising from the substance or mixture
Indium/indium 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 vapors, 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 absorbent 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.

7.3 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 : Store below 30°C

7.3 Specific end uses
No data available

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 product.

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

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 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 work place.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK(EN 14387) respirator cartridges as a backup to the 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>Appearance</th>
<th>White to yellow powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
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<tr>
<td>Odour Threshold</td>
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<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
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<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
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<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
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<tr>
<td>Vapour pressure</td>
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<tr>
<td>Vapour density</td>
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</tr>
<tr>
<td>Relative density</td>
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</tr>
<tr>
<td>Water Solubility</td>
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<tr>
<td>Partition coefficient: n-octanol/Water</td>
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</tr>
<tr>
<td>Autoignition Temperature</td>
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</tr>
<tr>
<td>Decomposition Temperature</td>
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<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
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</tr>
<tr>
<td>Oxidizing properties</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  
Strong oxidizing agents

10.6 Hazardous decomposition products  
Other decomposition products - No data available

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.
12 Ecological Information
  12.1 Toxicity
      No data available
  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
      No data available
  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 disposal company. Contact a licenced professional waste disposal service to dispose of this material.
  13.2 Contaminated packaging
      Dispose of as unused product.

14 Transport Information
  14.1 UN-No.
      ADR/RID: -      IMDG: -      IATA: -
  14.2 UN proper shipping name
      ADR/RID : no dangerous goods
      IMDG : no dangerous goods
      IATA : no dangerous goods
  14.3 Transport hazard class(es)
      ADR/RID: -      IMDG: -      IATA: -
  14.4 Packaging group
      ADR/RID: -      IMDG: -      IATA: -
  14.5 Environmental hazards
      ADR/RID: No      IMDG: Marine Pollutant:No      IATA: 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
16 Other Information
Further information
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