1. IDENTIFICATION OF THE SUBSTANCE OR PREPARATION AND OF THE COMPANY

Identification of the substance / preparation:
Product Name: INDION MB 11, MB 12, MB 115, MB 6SR, RPI, GMW 11 (GVI)
Chemical Name: Crosslinked Polystyrene with Sulphonic acid and quaternary amine functionality
Ionic Form: H⁺ / OH⁻
Use of the substance/preparation:
Main use: Water Purification

Identification of the Company:
Company undertaking: ION EXCHANGE (INDIA) LIMITED
Address: Ion House, Dr. E. Moses Road, Mahalaxmi, Mumbai 400 011.
Telephone: +91(022) 3989 0909
Telefax: +91(022) 2493 8737
Supplier: ION EXCHANGE (INDIA) LIMITED
Address: Ion House, Dr. E. Moses Road, Mahalaxmi, Mumbai 400 011.
Telephone: +91(022) 3989 0909
Telefax: +91(022) 2493 8737
Emergency phone number:
Telephone: +91(022) 3989 0909

2. COMPOSITION/INFORMATION ON INGREDIENTS

Description: Concentration
Functionalised co-polymer: 40 – 50% (Styrene/divinylbenzene)
Moisture content: 50 – 60%

3. HAZARDS IDENTIFICATION

Contact with eyes: Irritating to eyes (R36)
Contact with skin: Mildly irritating to skin.
Ecological hazards: May change the pH of receiving waters in case of major spillages.
4. FIRST AID MEASURES

Contact with skin
Remove contaminated clothing.
Remove particles and wash affected area with water.

Contact with eyes
Immediately wash out with plenty of water and remove all particles.
Seek medical attention if irritation persists.

Ingestion
Give 200 – 300 ml water to drink.
Never give anything by mouth to an unconscious person.
Seek immediate medical attention.

Inhalation
Remove patient to fresh air.
Seek medical advice.

5. FIRE-FIGHTING MEASURES
In case of fire, use foam, carbon dioxide or dry agent.
Substance evolves toxic fumes, wear self-contained breathing apparatus (see Section 10).
Wear full protective clothing including chemical protection suit.
Prevent run off water from entering drains if possible.
If polluted water reaches drainage systems or water courses, immediately inform appropriate authorities.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Keep people away.
Floor may be slippery, take care to avoid falls.

Environmental precautions
Do not allow to enter public sewers and water courses.

Clean up actions
Sweep-up and transfer to plastic containers for recovery or disposal, according to advise in section 13.

7. HANDLING AND STORAGE

Handling
The usual precautions for handling chemicals should be observed.
Risk of static discharge from dry beads.

Storage

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls
No special precautions are required for this product.

Occupational exposure controls

Respiratory protection
Not required for normal operation.

Hand protection
Wear suitable gloves.

Eye protection
Wear safety glasses or goggles.
An eyewash facility should be available.

**Skin protection**
Wear chemical protective overalls.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**General information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Yellow to brown coloured spherical beads</td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
<td>Solid</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>No odour</td>
</tr>
</tbody>
</table>

**Important information for human health, safety and environment**

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH as supplied</strong></td>
<td>Neutral in aqueous slurry</td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Flammability point</strong></td>
<td>The preparation starts burning over 230°C only if ignited.</td>
</tr>
<tr>
<td><strong>Flammability</strong></td>
<td>The preparation is not flammable before the evaporation of moistening water</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Burning properties</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Specific gravity</strong></td>
<td>1.15, approximately</td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>In water: virtually insoluble</td>
</tr>
<tr>
<td></td>
<td>In oil: insoluble</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>n-octanol/water: not applicable</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>Over 500°C</td>
</tr>
</tbody>
</table>

## 10. STABILITY AND REACTIVITY

**Conditions to avoid**
This material is considered stable under normal conditions.

**Materials to avoid**
Incompatible with strong oxidizing agents.
Contact with strong oxidizers, especially nitric acid, may produce low molecular weight organics that may form explosive mixtures.

**Hazardous decomposition products**
Combustion products may include monomers, residual organics, carbon and sulphur oxides.
11. TOXICOLOGICAL INFORMATION

Toxicological Information

LD 50 (Oral, Rat) : Not applicable
LD 50 (dermal, rabbit) : Not applicable
LC50 (inhalation, rat) : Not applicable
Irritation to eyes (rabbit) : Slightly Irritating
Skin corrosion / irritation (rabbit) : No data available
Ignition : No hazards anticipated if material has not exchanged hazardous substances.

Carcinogenicity
No evidence of carcinogenic effects.

Teratogenicity
No evidence of teratogenic effects.

Mutagenicity
No evidence of mutagenic effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Information not available.

Mobility
Virtually insoluble in water.
The product is not volatile.

Persistency and biodegradability
The product is not readily biodegradable

Risk of bioaccumulation
None

Other adverse effects
May change the pH of receiving waters in case of major spillages.

13. DISPOSAL CONSIDERATIONS

The product as delivered is a non-hazardous waste.

The used product may be subject to different classifications. In any case the product shall be disposed off, according to local, regional and national regulations.

EU number for exhausted or saturated ion exchange resins used for the preparation of drinking water or water for industrial use is 19 09 05.
EU number for exhausted or saturated ion exchange resins used in waste water treatment plants not otherwise specialized is 19 08 06.

14. TRANSPORT INFORMATION

Ion exchange resins as supplied are not classified as hazardous for transport.

Classification for ROAD and RAIL transport: Not regulated (Not dangerous for transport)

Classification for SEA transport: Not regulated (Not dangerous for transport)
Classification for AIR transport: Not regulated
(Not dangerous for transport)

15. REGULATORY INFORMATION

The product as supplied is non hazardous.

Risk phrases
R 36: Irritating to eyes.
S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 39: Wear eye/face protection

16. OTHER INFORMATION

Note:

Industrial grade products are not intended for analytical, food, medical and pharmaceutical applications without preliminary extensive purification.

Whilst every effort has been made to be as accurate as possible, Ion Exchange (India) Limited provides no warranty with respect to this information and disclaims all liability associated with its use.