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

   **Identification of the substance / preparation:**
   - **Product Name:** INDION ARU 104
   - **Chemical Name:** Crosslinked Polystyrene with quaternary ammonium functionality
   - **Ionic Form:** Chloride

   **Use of the substance/preparation**
   - **Main use:** Ion exchange / Water Purification

   **Identification of the Company:**
   - **Company undertaking:** ION EXCHANGE (INDIA) LIMITED
   - **Identification**
     - **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: 56 – 60 % (Styrene/divinylbenzene)
     - Moisture content: 40 – 44 %

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
Appearance: Golden yellow coloured spherical beads
Physical state: Solid
Odour: No odour

Important information for human health, safety and environment
pH as supplied: Neutral in aqueous slurry
Boiling point: Not applicable
Flammability point: The preparation starts burning over 230°C only if ignited.
Flammability: The preparation is not flammable before the evaporation of moistening water
Explosive properties: None
Burning properties: None
Specific gravity: 1.1, approximately
Solubility
- In water: virtually insoluble
- In oil: insoluble
Partition coefficient
- n-octanol/water: Not applicable
Viscosity: Not applicable
Flash point: Not applicable
Melting point: Not applicable
Auto-ignition temperature: Over 500°C

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.
- Persistence 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.