

MATERIAL SAFETY DATA SHEET

MSDS No 034
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1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

Identification of the substance / preparation

Product Name **INDION SIR**
Chemical name Crosslinked Polystyrene with Imino - diacetic functionality
Ionic form Sodium

Use of the substance/preparation

Main use De-calcification of Secondary brine

Identification of the Company

Company undertaking ION EXCHANGE INDIA LIMITED

Identification

Address Tiecicon House
 Dr. E. Moses Road
 Mahalaxmi, Mumbai 400 011.
Telephone +91 (022) 3989 0909
Telefax +91 (022) 2493 8737

Supplier ION EXCHANGE INDIA LIMITED

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Emergency phone number

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2. COMPOSITION/INFORMATION ON INGREDIENTS

| Description | Concentration |
|---------------------------|-----------------------------------|
| Functionalised co-polymer | 35 – 45% (Styrene/divinylbenzene) |

Moisture content 45 – 50 %

CAS number ---

EINECS number ---

R phrases(see section 16) R 36

Symbols Xi

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 | Store above 0° C. Keep at temperature not exceeding 40° C. Avoid dehydration (when rewetted the resin volume may increase and cause a rupture of the packaging). Keep only in the original container. |

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 Off-white coloured Spherical beads
Physical state Solid
Odour No odour

Important information for human health, safety and environment

pH as supplied Neutral
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 1.05– 1.07 (in water)
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) : NA
 LD 50 (dermal , rabbit) :Not applicable
 LC50(inhalation , rat) : Not applicable
 Irritation to eyes(rabbit) :Irritant by mechanical and chemical action.
 Irritation to skin(rabbit) : mildly irritating
 Ingestion : 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 special, hazardous waste.
 The used product, fully loaded with non-hazardous ions is a non-hazardous special waste, while the used product loaded with hazardous ions is a hazardous special waste.
 In any case the product shall be disposed of 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.
 The product loaded with hazardous ions is subject to transport regulations for hazardous wastes.

15. REGULATORY INFORMATION

Risk phrases The product as supplied is classified hazardous.
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 1: Industrial grade products are not intended for analytical, food, medical and pharmaceutical applications without preliminary extensive purification.

Note 2: This Material Safety Data Sheet has been written to comply with following directives:

67/548/EEC , 88/379/EEC , 91/155/EEC , their revisions and amendments .

R phrases R 36 : Irritating to eyes

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