

MATERIAL SAFETY DATA SHEET

Revision Date : 01/06/2011

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

Identification of the substance / preparation

Product Name INDION 404
Chemical Name Crosslinked Polystyrene with sulphonic acid functionality
Ionic Form Calcium

Use of the substance/preparation

Main use Ion Exchange / adsorbent

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

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Emergency phone number

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Description Concentration
Functionalised co-polymer > 92 % (Styrene / divinylbenzene)
Moisture content < 8 %

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

Incase 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 advice in section 13. |

7. HANDLING AND STORAGE

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

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 powder

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

1.27, approximately

Solubility

In water : virtually insoluble

In oil : insoluble

Partition coefficient

Not applicable

n-octanol/water

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

No data are available for this material. The information given is based on properties of materials with similar composition.

Toxicological Information

LD 50 (Oral, Rat) : 3000 mg/kg of body weight
 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.
 No evidence of carcinogenic effects.
 No evidence of teratogenic effects.
 No evidence of mutagenic effects.

Carcinogenicity
Teratogenicity
Mutagenicity

12. ECOLOGICAL INFORMATION

Ecotoxicity
Mobility

Information not available.
 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

Risk phrases

The product as supplied is non hazardous.

R 36 : Irritating to eyes.

S 26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 : 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.