

INDION® MB 115

Description

INDION MB 115 is a mixed bed ion exchange resin. It is a mixture of highly purified and super regenerated Strong acid cation and strong base anion resins in 40:60 volume ratio.

Applications

INDION MB 115 is recommended in any non regenerable mixed bed application where reliable production of the highest quality water is required and where "as supplied" resin must have an absolute minimum of ionic and nonionic contamination.

Characteristics

Physical

Appearance : Spherical beads

Shipping weight * : 710 kg/m³, approximately

Particle size range : 0.3 to 1.2 mm

> 1.2 mm : 5.0 %, maximum < 0.3 mm : 0.5 %, maximum p-efficient : 1.8, maximum

Uniformity co-efficient : 1.8, maximum

Effective size : 0.45 to 0.60 mm

Microscopic Examination : Surface cracks not more than 5 %

Chemical Cation resin Anion resin

MatrixCrosslinked polystyreneCrosslinked polystyreneTypeGelGelFunctional GroupSulphonic acidQuaternary ammonium

Total exchange capacity 1.8 meq/ml 1.0 meq/ml

Ionic conversion 99 % minimum in H form 90 % minimum in OH form

1 % maximum in Cl form

5% maximum in CO₃ form

Moisture holding capacity 50 - 55 % 60 % maximum

Thermal stability Up to 120° C Up to 60° C

Chemical stability: Stable in pH range 0 - 14

Resistant to oxidizing and reducing agents

^{*} Weight of resin, as supplied, occupying 1 m³ in a unit after backwashing and draining.

Variants

INDION MB 115 resin is also available with the additional feature of colour change at exhaustion. Three variants of this colour indicating Indion MB 115 are available:

Indion MB 115 (GVI) Green to Violet
Indion MB 115 (BYI) Blue to Yellow
Indion MB 115 (GOI) Green to Orange

Packing

PVC Jars with inner liner bags 5 / 6 lts
LDPE lined bags 0.5 cft / 1 cft / 25 lts
HDPE lined bags 25 / 50 lts
HDPE drums 50 / 100 / 180 lts

Storage

Ion exchange resins require proper care at all times. Resins must never be allowed to become dry. Resins should therefore be always kept in shade. Since INDION MB 115 is supplied in highly regenerated condition, any exposure to atmospheric air must be avoided as this will convert it to the carbonate form. The resin packing should not be opened during storage.

Safety

Acid and alkali solutions used for regeneration are corrosive and should be handled in a manner that will prevent eye and skin contact. If any oxidising agents are used, necessary safety precautions should be observed to avoid accidents and damage to the resin.

INDION range of Ion Exchange resins are produced in a state of the art ISO 9001 and ISO 14001 certified manufacturing facilities at Ankleshwar, in the state of Gujarat in India. This product data sheet (issue 09/2008) replaces previous issues.

To the best of our knowledge the information contained in this publication is accurate. Ion Exchange (India) Ltd. maintains a policy of continuous development and reserves the right to amend the information given herein without notice.

INDION is the registered trademark



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MATERIAL SAFETY DATA SHEET

MSDS No 056

First Issue Date 01.08.2004

Revision No 00

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

Identification of the substance / preparation
Product Name INDION MB 115

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

Identification

Address

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Description Concentration

Functionalised co-polymer 40 - 50% (Styrene/divinylbenzene)

Moisture content 50–60%

CAS number ---

EINECS number --R phrases(see section 16) R 36

R phrases(see section 16) R 3 SymbolsXi

3. HAZARDS IDENTIFICATION

Contact with eyesIrritating to eyes (R36)Contact with skinMildly irritating to skin.

Ecological hazards May change the pH of receiving waters in case of

major spillages.



4. FIRST AID MEASURES

Contact with skinRemove 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.

Environmental precautions

Clean up actions

Floor may be slippery, take care to avoid falls. Do not allow to enter public sewers and water courses. 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 Mixture of yellow & Brown 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 propertiesNone
Burning properties
None

Specific gravity

1.17– 1.19 (in water)

Solubility

In Water; virtually insoluble

In oil ; insoluble

Partition coefficient Not applicable

n-octonol/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

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

EcotoxicityMobility
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 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

The product as supplied is classified hazardous.

Risk phrases R 36 : Irritating to eyes.

\$ 26: In case of contact with eyes, rinse immediately

with plenty of water and seek medical advice.

\$ 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

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 it's'use.