

INDION[®] 770

Description

INDION 770 resin is a gel type strongly acidic cation exchanger, used in catalytic application.

INDION 770 is supplied in wet form as golden yellow to brown coloured translucent beads.

The functional groups throughout the entire structure are readily accessible to liquid or gaseous reactants thus ensuring efficient performance. The main application of INDION 770 is in the production of Bisphenol A.

Characteristics

Appearance	:	Golden yellow to brown beads
Matrix	:	Styrene divinylbenzene copolymer
Functional group	:	Sulphonic acid
Ionic form as supplied	:	Hydrogen
Total exchange capacity in Na form	:	1.4 meq/ml, minimum
Moisture holding capacity	:	63 - 66 %
Shipping weight *	:	740 kg/m ³ , approximately
Particle size range	:	0.3 to 1.2 mm
	:	> 1.2 mm : 5.0%, maximum
	:	< 0.355 mm : 1.0%, maximum
Uniformity co-efficient	:	1.7, maximum
Effective size	:	0.45 to 0.60 mm
Maximum operating temperature	:	120 ^o C
Operating pH range	:	0 to 14
Resistance to reducing agents	:	Good
Resistance to oxidising agents	:	Generally good, chlorine should be absent

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

Packing

HDPE Lined bags	25/ 50 lts	LDPE bags	1 cft / 25 lts
Super sack	1000 lts	Super sack	35 cft
MS drums		Fiber drums	
with liner bags	180 lts	with liner bags	7 cft

Storage

Ion exchange resins require proper care at all times. The resins must never be allowed to become dry. Repeated drying and rewetting produce stresses analogous to those due to osmotic shock and can lead to fragmentation of Ion exchangers.

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.

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 of Ion Exchange (India) Ltd.

ION EXCHANGE (INDIA) LTD.

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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 770
Chemical Name Crosslinked Polystyrene with Sulphonic acid functionality
Ionic Form Hydrogen

Use of the substance/preparation

Main use Water Purification

Identification of the Company :

Company undertaking ION EXCHANGE (INDIA) LIMITED

Identification

Address Ion House,
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Description Concentration
Functionalised co-polymer 34 – 37% (Styrene/divinylbenzene)
Moisture content 63 – 66%

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.
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

Yellow to brown coloured spherical beads

Physical state

Solid

Odour

No odour

Important information for human health, safety and environment

pH as supplied

Acidic 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

1.2, 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

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.
 No evidence of carcinogenic effects.
 No evidence of teratogenic effects.
 No evidence of mutagenic effects.

Carcinogenicity

Teratogenicity

Mutagenicity

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

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.

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.