

INDION® 870

Description

INDION 870 is a macroporous weakly basic anion exchange resin. It is useful for the adsorption of acidic solutes from either aqueous or non-aqueous media. INDION 870 is supplied in free base form. The basicity of primary amine functional group makes this resin capable of withstanding high temperature (upto 100 degree C) and useful in removal of mineral acid impurities like hydrochloric acid and sulphuric acid from their mixtures with organic acids such as citric acid and tartaric acid.

Applications

A wide variety of chemical products require deacidification before they can be used, shipped or stored. The properties of Indion 870 are well suited for applications, such as:

- Removal of strong mineral acids from organic solvents.
- Deacidification of phenol/alkyl phenol streams.
- Separation of mineral acid impurities from weak organic acids.
- Deacidification (removal of Formic acid) of Dimethyl formamide.

Characteristics

Appearance	:	Off white to brown opaque beads
Matrix	:	Styrene divinyl benzene copolymer
Functional Group	:	Primary amine
Ionic form as supplied	:	Free base
Total exchange capacity	:	1.6 meq/ml, minimum
Moisture holding capacity in Cl form	:	52 - 62 %
Shipping weight *	:	640 - 690 kg/m ³ , approximately
Particle size range	:	0.3 to 1.2 mm
> 1.2 mm	:	5.0%, maximum
< 0.3 mm	:	1.0%, maximum
Uniformity co-efficient	:	1.7, maximum
Effective size	:	0.40 - 0.55 mm
Maximum operating temperature	:	60° C in free base form 80° C in hydrochloride form
Operating pH range	:	0 to 7
Volume change	:	Free base to Hydrochloride, 25 % Maximum
Resistance to Reducing agents	:	Good
Resistance to oxidizing 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. Regularly open the plastic bags and check the condition of the resin when in storage. If not moist, add enough

clean demineralised water and keep it in completely moist condition. Always keep the resin drum in the shade. Recommended storage temperature is between 20° C and 40° C.

Safety

Acid and alkali solutions 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.



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Manufacturing Units

India - Ankleshwar | Hosur | Patancheru | Rabale | Verna | Wada

Overseas - Hamriyah | Kingdom of Bahrain | Indonesia | Bangladesh

All India Service and Dealer Network

www.ionindia.com



MATERIAL SAFETY DATA SHEET

Revision Date : 05/05/2018

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

Identification of the substance / preparation :

Product Name INDION 870
Chemical Name Crosslinked Polystyrene with tertiary ammonium functionality
Ionic Form Free base

Use of the substance/preparation

Main use Ion exchange / Water Purification

Identification of the Company :

Company undertaking ION EXCHANGE (INDIA) LIMITED

Identification

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Dr. E. Moses Road,
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Description Concentration
Functionalised co-polymer 45 – 53 % (Styrene/divinylbenzene)
Moisture content 52 – 62 %

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 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

Off white to brown 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

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.