

# INDION® 652

## **Description**

INDION 652 is a weak acid carboxylic cation exchange resin supplied in the Hydrogen form. The very weakly acidic carboxylic groups make it ideal for the uptake of both toxic and undesirable heavy metals and temporary hardness from process liquors and industrial waters.

INDION 652 is ideal for applications like:

- Recovery of streptomycin, Neomycin, Gentamycin etc.
- Treatment of amino acids.
- Separation of enzymes, hormones, alkaloids etc.

### **Characteristics**

Appearance : Off white opaque beads

Matrix : Methacrylic acid divinyl benzene

Functional Group : Carboxylic acid

Ionic form as supplied : Hydrogen

Total exchange capacity : 3.5 meg/ml,minimum

Moisture holding capacity : 47 - 55 %

Shipping Weight \* : 690 kg/m³, approximately

Particle size range : 0.3 to 1.2 mm

> 1.2 mm : 5.0%, maximum

< 0.3 mm : 2.0%, maximum

Uniformity co-efficient : 1.7, maximum

Effective size : 0.40 to 0.50 mm

Maximum operating temperature : 100° C in H<sup>+</sup> form

Operating pH range : 6 to 14

Volume change : H to Na, 75.0 % minimum

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.

## **Recommended operating conditions**

Indion 652 may be operated at different flowrates depending upon its application i.e. in chemical processing or industrial water treatment. The mode of operation in chemical processing is optimised for high adsorption and lower leakage of vitamins, antibiotics etc. from fermented broth. This is achieved by passing the feed solution upflow through a bed of INDION 652 at a flowrate that expands the resin bed approximately to 25%. The upflow (fluidised) operation is required to permit the particulate matter to pass through the column without clogging the resin bed.

INDION 652 can be regenerated using mineral acids such as HCl or H<sub>2</sub>SO<sub>4</sub> at 100% - 120% of stochiometric while the conditioning cycle can be used to obtain the desired form of resins for stabilised exchange kinetics.

INDION 652 can also be recommended to remove temporary hardness (bicarbonate hardness) to produce mildly acidic pleasant tasting water.

## **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 bag	gs 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 the storage. If not moist, add enough clean demineralised water and keep it in completely moist condition.

## 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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