

INDION® PA 500

Industrial Grade Polymeric Adsorbent

Description

INDION PA 500 is a polymeric adsorbent supplied as insoluble off white translucent beads. It is a non-ionic, hydrophobic crosslinked polymer. It is a macroporous polymer having high surface area and aromatic nature at it's surface. This surface gives INDION PA 500 excellent physical , chemical and thermal stability.

INDION PA 500 can be regenerated and used through repeated cycles in column or batch operations. It's pore size distribution makes it an excellent choice for the removal of a wide variety of large organic molecules from polar solvents.

Pretreatment

INDION PA 500 polymeric adsorbent is shipped as a water wet product imbibed with sodium chloride and sodium carbonate salts to retard bacterial growth. These salts must be washed from the adsorbent prior to use and it is suggested that this be achieved by washing with water at a linear flowrate of 5-10 m/h until the required level is achieved. In some sensitive

applications, residual monomeric or oligomeric compounds may be required to be removed from the adsorbent. A regeneration with the proposed regenerant is also recommended prior to beginning the first service cycle. If the regenerant is an alcohol, it must be displaced with water prior to beginning the first loading cycle.

Applications

- Recovery and purification of antibiotics, water soluble steroids, enzymes and proteins.
- Recovery of plant extracts and fermentation products
- Enzyme immobilization.
- Separation of non-polar organic solutes from polar solvents.
- Recovery and recycle of phenolic and aromatic compounds.
- Removal of chlorinated solvents, herbicides and pesticides from aqueous streams.

Characteristics

Appearance	:	Translucent beads
Matrix	:	Styrene divinylbenzene copolymer
Moisture holding capacity	:	62 - 69 %
Shipping weight *	:	660 kg/m ³ , approximately
Particle size range	:	0.3 to 0.85 mm
> 0.85 mm	:	10.0 %, maximum
< 0.3 mm	:	5.0 %, maximum
Uniformity co-efficient	:	1.8, maximum
Effective size	:	0.40 to 0.50 mm
Surface area	:	≥ 500 m ² /g
Porosity	:	≥ 1.45 ml/g
Maximum operating temperature	:	250° C
Operating pH range	:	0 to 14
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.

Regenerants / eluting agents

- Methanol or other water miscible organic solvents (acetone, isopropanol etc.)
- Dilute bases (0.1-0.5% NaOH) for weakly acidic compounds.
- Dilute acids (0.1-0.5% HCl) for weakly basic compounds.
- Water where adsorption is from an ionic solution.
- Steam for volatile materials.

Packing

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

Storage

Ion exchange resins require a proper care at all times. The resins must never be allowed to become dry. The plastic bags must be opened regularly and the condition of the resin checked, when in storage. If dry add enough clean water to keep it in complete moist condition. The resin drum must always be kept in shade. Recommended storage temperature is between 20° C and 40° C.

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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