

# INDION® 140

## Description

INDION 140 resin is a macroporous strongly acidic cation exchanger developed for heterogeneous acid catalytic application.

INDION 140 is supplied in dry form as opaque, grey coloured spherical beads. A proper mix of moderate cross linking and porosity gives this product outstanding physical stability while maintaining the high exchange capacity of conventional gel resins.

This combination of properties makes INDION 140 a unique catalyst and also an efficient exchanger in non-aqueous application.

The unique structure of INDION 140 provides genuine porosity and a strong matrix together, with small volume change in different solutions and solvents. The large surface area leads to high catalytic activity.

The functional groups throughout the entire structure are readily accessible to liquid or gaseous reactants thus ensuring efficient performance. The main applications are alkylations, esterification, etherification and condensation hydrolysis.

### Characteristics

Appearance	:	Opaque grey beads
Matrix	:	Styrene divinylbenzene copolymer
Functional Group	:	Sulphonic acid
Ionic form as supplied	:	Hydrogen
Concentration of acid sites	:	4.8 meq/dry g, minimum
Moisture content	:	1.0 %, maximum
Particle size range	:	0.42 to 1.2 mm
> 1.2 mm	:	5.0%, maximum
< 0.42 mm	:	5.0%, maximum
Maximum operating temperature	:	150 °C
Operating pH range	:	0 to 7

## Reuse of INDION 140

On completion of the catalytic reaction, the resin should be filtered off the products. The solvent as well as unreacted reactants associated with the resin should be washed off by rinsing with either solvent or one of the reactants. These washings can then be reused in subsequent batch processes. If water formation exists in the reaction after filtration, dry the resin. This can be carried out in an oven at about 90°C - 100°C for 6 to 10 hours to reduce moisture content to less than 5%.

## Packing

HDPE carboys with inner  
double plastic liner bags

25 / 50 kgs

## Storage

Ion exchange resin catalysts are hygroscopic in nature. Therefore it is essential to store the dry INDION 140 in tightly packed containers, to prevent absorption of atmospheric moisture. In case moisture has been absorbed, it can be dried at 90°C - 100°C as mentioned above.

## 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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