

# INDION® TCR

## Description

INDION TCR is a crosslinked macroporous ion exchanger having thio-uronium as functional groups. It has been specifically developed for the selective adsorption of mercury and precious metals. INDION TCR is completely insoluble in water and all common solvents. It is stable in acidic as well as alkaline pH range. INDION TCR has excellent physical stability due to its macroporous structure.

It is unaffected by reducing agents. However, INDION TCR can get decrosslinked in the presence of oxidising

agents such as chlorine, peroxides, permanganates etc. It is therefore essential to remove all the oxidants from the process stream, before it comes in contact with INDION TCR.

## Applications

INDION TCR is specifically used for removing mercury and precious metals from waste water and other streams.

### Characteristics

Appearance	:	Opaque off white to brown beads
Matrix	:	Crosslinked polystyrene
Functional Group	:	Thio - uronium
Ionic form as supplied	:	Hydrogen
Total exchange capacity	:	1.6 meq/ml, minimum
Moisture holding capacity	:	41 - 47 %
Shipping weight *	:	710 kg/m <sup>3</sup> approximately
Particle size range	:	0.3 mm 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 to 0.50 mm
Maximum operating temperature	:	80° C
Operating pH range	:	1 to 10
Volume change	:	H <sup>+</sup> to Hg <sup>+2</sup> , -6 % approximately
Resistance to reducing agents	:	Good
Resistance to oxidizing agents	:	Generally good, chlorine should be absent

\* Weight of resin, as supplied, occupying 1 m<sup>3</sup> 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	180 lts	Fiber drums	7 cft
with liner bags		with liner bags	

## Storage

Ion exchange resin requires proper care at all times. The resin 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 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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