

# INDION<sup>®</sup> NSSR

## Description

INDION NSSR is a macroporous strongly basic anion resin which is tailor made to suit removal of nitrate ions from water for potable uses. The proper mix of physico-chemical properties gives ideal nitrate exchange kinetics to this resin making suitable for nitrate removal in the presence of sulphate ions.

High concentration of nitrate in water is a potential hazard for two reasons. The nitrate ions form complexes with the blood and in the long run cause oxygen depletion affecting human life. The flow of nitrate bearing water through iron pipes can cause depletion of oxygen leading to corrosion. In view of these difficulties use of an Ion Exchange resin is the preferred process for nitrate removal.

Characteristics	
Appearance	Opaque off white to brown beads
Matrix	Styrene divinylbenzene copolymer
Functional Group	Quaternary ammonium
Ionic form as supplied	Chloride
Total exchange capacity	0.9 meq/ml, minimum
Moisture holding capacity	45 - 55%
Whole beads	90%
Shipping weight*	650 - 690 kg/m <sup>3</sup>
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 to 0.55 mm
Maximum operating temperature	100°C in Cl form
Operating pH range	0 to 14
Resistance to reducing agents	Good
Resistance to oxidizing agents	Generally good, chlorine should be absent
Osmotic stability	Excellent
Typical operating data	
Bed Depth	1.0 m
Backwash	5 m <sup>3</sup> / hm <sup>2</sup> for 5 to 10 minutes
Regenerant	NaCl

Regeneration level	125 kg of NaCl/m <sup>3</sup>
Regenerant concentration	5 % - 10% w/v
Injection flow rate	2 - 4 BV/h
Slow rinse volume	2 BV
Slow rinse flow rate	At injection flow rate
Fast rinse volume	6 BV
Fast rinse flow rate	At service flow rate
Minimum flow greater than or equal to	0.082 gpm/ft <sup>3</sup> of resin, 0.66 LPH/l of resin 0.66 BV/h
*Weight of resin, as supplied, occupying 1m <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	:	35/40/42 cft
MS/HDPE drums with liner bags	:	180/200 lts
Fiber drums with liner bags	:	7 cft

## Storage

Ion exchange resins require 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.



CONFORMANCE STATEMENT: This product conforms to NSF / ANSI Standard 61 and is certified with GOLD SEAL from WQA

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**<sup>®</sup> is the registered trademark of Ion Exchange (India) Ltd.



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Vashi | Visakhapatnam

### Overseas Offices

Bangladesh | Canada | Indonesia | Kenya  
Malaysia | Oman | Portugal | Saudi Arabia | Singapore  
South Africa | Sri Lanka | Tanzania | Thailand | UAE | USA

### Manufacturing Units

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

Overseas - Bangladesh | Indonesia | Saudi Arabia | UAE

All India Service and Dealer Network

[www.ionexchangeglobal.com](http://www.ionexchangeglobal.com) | [www.ionresins.com](http://www.ionresins.com)

