

# INDION<sup>®</sup> 860

## Description

INDION 860 is a macroporous weakly basic anion resin having a tertiary amine functionality attached to a polymeric styrene divinyl benzene matrix. INDION 860 is supplied in free base form ready for immediate use. The combination of macroporous structure and tertiary amine functionality results in fast reaction rates, high regeneration efficiency, low rinse requirements and excellent chemical and physical stability.

INDION 860 can be effectively regenerated with sodium hydroxide, ammonium hydroxide and sodium carbonate. It is regenerated with 110 to 120% of the quantity of alkali chemically equivalent to the operating capacity as compared to 200-300%

required for strongly basic anion exchange resins. INDION 860 can be used to treat water/process streams to remove free mineral acidity. INDION 860 is used in either separate or layered bed configuration.

Areas of application include conventional demineralisation of process liquors at ambient temperature, deacidification of formaldehyde, de-ashing of starch based sweeteners.

INDION 860 can also be used for the recovery of chromate from plating rinse water and cooling tower blow down. INDION 860 is also used as a catalyst in aldolization reactions.

| Characteristics                             |  |
|---|--|
| Appearance                                  | Off white to brown opaque beads                |
| Matrix                                      | Styrene divinyl benzene copolymer              |
| Functional Group                            | Tertiary amine                                 |
| Ionic form as supplied                      | Free base                                      |
| Total exchange capacity                     | 1.4 meq/ml, minimum                            |
| Moisture holding capacity in free base form | 48 - 54 %                                      |
| Shipping weight*                            | 620 - 670 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               | 60° C free base form, 80° C hydrochloride form |
| Operating pH range                          | 0 to 7   |
| Volume change                               | Free base to hydrochloride form, 25%, maximum  |

|   |   |
|---|---|
| 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                    | : | 35/40/42 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.

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.



## ION EXCHANGE (INDIA) LTD.

### Corporate Office

Ion House, Dr. E. Moses Road, Mahalaxmi,  
Mumbai - 400011 | Tel: +91 22 6231 2000  
E-mail: ieil@ionexchange.co.in

### International Division

R-14, T.T.C MIDC, Thane - Belapur Road, Rabale,  
Navi Mumbai - 400 701 | Tel: +91 22 6857 2400  
E-mail: export.sales@ionexchange.co.in

### Regional and Branch Offices

Bengaluru | Bhubaneswar | Chandigarh | Chennai  
Delhi | Hyderabad | Kolkata | Lucknow | Vadodara  
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)

