



# AMBERLITE® IRA92

Industrial Grade Weak Base Anion Exchanger

## PRODUCT DATA SHEET

AMBERLITE IRA92 is a high capacity polystyrene, weak base anion exchanger. This resin is highly efficient for the uptake of strong acids (e.g. HCl, H<sub>2</sub>SO<sub>4</sub>) when following a strong acid cation exchanger in the H form. Its macroporous

structure ensures excellent adsorption and desorption of organic matter. It has an outstanding mechanical and osmotic stability, making it suitable for the treatment of solution with high ionic concentrations.

### PROPERTIES

Matrix _____	Macroporous polystyrene
Functional groups _____	-NR <sub>2</sub> : at least 80 %
Physical form _____	Ivory-coloured beads
Ionic form as shipped _____	Free Base (FB)
Total exchange capacity <sup>[1]</sup> _____	≥ 1.60 eq/L (FB form)
Moisture holding capacity <sup>[1]</sup> _____	40 to 50 % (FB form)
Shipping weight _____	660 g/L
Specific gravity _____	1.035 to 1.065 (FB form)
Particle size _____	
Harmonic mean size _____	580 to 780 µm
Uniformity coefficient _____	≤ 1.8
Fines content <sup>[1]</sup> _____	< 0.355 mm : 3 % max
Maximum reversible swelling _____	FB → Cl <sup>-</sup> : 25 %
Chemical resistance _____	Insoluble in dilute solutions of acids or bases and common solvents

<sup>[1]</sup> Contractual value

Test methods available upon request

### SUGGESTED OPERATING CONDITIONS

Operating temperature limit _____	90°C (FB form)
Service flow rate _____	5 to 30 BV*/h
Regenerants _____	NaOH    NH <sub>3</sub> Na <sub>2</sub> CO <sub>3</sub>
Level (g/L) _____	40 to 80    40 to 80    60 to 130
Concentration (%) _____	2 to 6    2 to 3    5 to 8
Flow rate (BV/h) _____	2 to 8    2 to 8    2 to 8
Minimum contact time _____	30 minutes
Slow rinse _____	2 BV at regeneration flow rate
Fast rinse _____	4 to 8 BV at service flow rate

\* 1 BV (Bed Volume) = 1 m<sup>3</sup> solution per m<sup>3</sup> resin

## APPLICATIONS

The high total capacity of AMBERLITE IRA92 makes it particularly suitable for the removal of strong anions from solutions with relatively high dissolved solids ; its regeneration efficiency is close to the theoretical output. A high operating capacity is obtained from AMBERLITE IRA92 under conditions where a high TDS water is treated at a moderate specific flow rate. The combined adsorption efficiency and physical stability of AMBERLITE IRA92 make it the product of choice for demineralisation of sugar juices.

On account of its outstanding characteristics AMBERLITE IRA92 is used in the following special applications :

- De-acidification of formol,

- Purification of alcaloids,
- Demineralisation of gelatine, lactose, glucose,
- Recovery of chromates from cooling circuits,
- Recycling of rinse water in electroplating workshop.

## FOOD PROCESSING

Rohm and Haas manufactures special resins for food processing and drinking water applications. As governmental regulations vary from country to country, it is recommended that potential users contact their Duolite representative to assess the best choice of resin and optimum operating conditions.

All our products are produced in ISO 9002 certified manufacturing facilities.

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Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with Ion Exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with Ion Exchange Resins, consult sources knowledgeable in the handling of these materials.

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