PRODUCT DATA SHEET

AMBERLITE™ IRA910 Cl

Industrial Grade Strong Base Anion Exchanger

AMBERLITE IRA910 Cl resin is a strongly basic, type 2, macroreticular anion exchange resin. The fixed porosity of the resin bead structure is important. It is a true, discretely porous network which differs completely from conventional gel type resins, and provides far more complete removal of large organic molecules during adsorption and desorption cycles. The crosslinked polystyrenic matrix makes this resin particularly stable mechanically.

PROPERTIES

Physical form	Pale yellow, opaque spherical beads
Matrix	Macroreticular crosslinked polystyrene
Functional group	Dimethyl ethanol ammonium
Ionic form as shipped	Chloride
Total exchange capacity [1]	≥ 1.00 eq/L (Cl^- form)
Moisture holding capacity [1]	54 to 61 % (Cl^- form)
Specific gravity	1.08 to 1.12 (Cl^- form)
Shipping weight	700 g/L
Particle size	
Uniformity coefficient	≤ 1.9
Harmonic mean size	0.53 to 0.80 mm
< 0.300 mm [1]	2.5 % max
Maximum reversible swelling	$Cl^- \rightarrow OH^-$: 15 %

[1] *Contractual value*

Test methods available upon request

SUGGESTED OPERATING CONDITIONS (FOR WATER TREATMENT)

Maximum operating temperature	35°C
Minimum bed depth	700 mm
Service flow rate	5 to 40 BV*/h
Regeneration	
Regenerant	NaOH
Level	40 to 100 g/L
Concentration	2 to 4 %
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^3 solution per m^3 resin*

APPLICATIONS

With its excellent resistance to attrition and osmotic stress, AMBERLITE IRA910 Cl resin is used in co-flow regeneration systems requiring very severe specifications : very deep beds, treatment of highly saline solutions. In the sugar industry, AMBERLITE IRA910 Cl resin, usually mixed with a cationic resin, operates in mixed bed polishers for glucose syrups purification. In this position, last traces of coloured bodies, weak acids, hydroxymethyl-furfural are removed.

PERFORMANCE

Operating capacity and silica leakage depend on several factors such as water analysis, temperature and regenerant level. The engineering data sheet EDS 0256 A provide information to calculate the operating capacity and silica leakage of AMBERLITE IRA910 Cl resin used in water treatment.

HYDRAULIC CHARACTERISTICS

AMBERLITE IRA910 Cl resin gives a pressure drop of about 15 kPa/m bed depth per 10 m/h at 15°C.
A backwash flow rate of 6 m/h gives a bed expansion of about 65 % at 15°C in water. Pressure drop data are valid at the start of the service run with a clear water and a correctly classifed bed. These data are valid for water treatment and have to be corrected according to the solution to be treated.

LIMITS OF USE

Rohm and Haas manufactures special resins for food processing and potable water applications. As governmental regulations vary from country to country, it is recommended that potential users seek advice from their Amberlite representative in order to determine the best resin choice and optimum operating conditions.

All our products are manufactured in ISO 9001 certified facilities.

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ROHM AND HAAS

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.