



AMBERLITE® IRA96RF

Weak Base Anion Exchanger

PRODUCT DATA SHEET

AMBERLITE IRA96RF is a macroreticular, weak base, anion exchange resin. Its very stable structure and limited reversible swelling make it very resistant to osmotic shock. The high degree of porosity of this resin provides efficient adsorption of large organic molecules and their desorption during regeneration, thus allowing excellent protection against organic fouling. AMBERLITE IRA96RF is intended primarily for the removal of strong acids

from water following a strongly acidic cation exchange resin, and it provides excellent protection against organic fouling for the strong base anion exchange resin placed in the same vessel. The particle size distribution of AMBERLITE IRA96RF has been specifically selected to give optimum performance in packed and floating bed applications.

PROPERTIES

Matrix _____	Styrene divinylbenzene copolymer
Functional Groups _____	Tertiary amine
Physical Form _____	Opaque spherical beads
Ionic Form as Shipped _____	Free Base (FB)
Total Exchange Capacity _____	1.25 meq/ml minimum (FB form)
Moisture Holding Capacity _____	57 to 63 % (FB form)
Shipping Weight _____	42 lbs/ft ³
Harmonic Mean Size _____	0.63 to 0.83 mm
Uniformity Coefficient _____	1.5 maximum
Screen Grading (wet) _____	16 to 50 mesh (US Std Screens)
Screen Analysis _____	1.0 % maximum on 16 mesh (US Std Screens) 0.1 % maximum thru 50 mesh (US Std Screens)
Maximum Reversible Swelling _____	FB → Cl ⁻ : approximately 15 %

Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

pH Range _____	0 to 7
Maximum Operating Temperature _____	212 °F
Minimum Bed Depth _____	30 inches
Service flow rate _____	0.5 to 5 gpm/ft ³
Regenerant (100% basis) _____	NaOH
Flow Rate _____	0.25 to 1.0 gpm/ft ³
Concentration _____	2 to 4 %
Level _____	120 % of ionic load
Minimum Contact Time _____	30 minutes
Slow Rinse _____	15 gal/ft ³ at regeneration flow rate
Fast Rinse _____	30 to 60 gal/ft ³ at service flow rate

PERFORMANCE

Organic Matter

Due to its high porosity, AMBERLITE IRA96RF can adsorb, reversibly, organic molecules from solution. It is therefore very useful to protect strongly basic resins from irreversible fouling.

Physical stability

The tough, durable structure of AMBERLITE IRA96RF associated with the limited reversible volume change in service offers excellent resistance to attrition from osmotic or physical stress. In addition, the resin has outstanding resistance to oxidation.

HYDRAULIC CHARACTERISTICS

AMBERLITE IRA96RF gives a pressure drop of about 0.57 psi/ft bed depth at a flow rate of 4.1 gpm/ft² at 60°F.

A backwash flow rate of 1.8 gpm/ft² gives a bed expansion of about 70 % at 60°F.

LIMITS OF USE

AMBERLITE IRA96RF is suitable for industrial uses. For all other specific applications such as pharmaceutical, food processing or potable water applications, it is recommended that all potential users seek advice from Rohm and Haas in order to determine the best resin choice and optimum operating conditions.

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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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