AMBERLITE™ IRA478RF Cl Resin

Industrial Grade Strong Base Anion Exchange Resins

Description

AMBERLITE™ IRA478RF Cl Resin is an acrylic gel type bifunctional anion exchange resin, with unique chemical and physical properties. It combines the high operating capacity normally associated with weakly basic acrylic anion exchange resins with quaternary ammonium, type 1, strong base functionality. This enables AMBERLITE IRA478RF Cl Resin to achieve removal of all anions including the weakly dissociated ions like silica and carbon dioxide. Due to its crosslinked acrylic gel structure AMBERLITE IRA478RF Cl Resin shows an outstanding resistance to organic fouling.

AMBERLITE IRA478RF Cl Resin is recommended as the working anion exchange resin for demineralisation of water having more than 75% Free Mineral Acidity and up to 10% silica. Under these conditions AMBERLITE IRA478RF Cl will give excellent operating capacity with low caustic regenerant consumption. The particle size distribution of AMBERLITE IRA478RF Cl Resin has been specially selected to give optimum performance in floating and packed bed applications.

Typical Physical and Chemical Properties

Physical form		Translucent white spherical beads
Matrix		Crosslinked acrylic gel structure
Functional group		Quaternary ammonium/tertiary amine
Ionic form as shipped		Free Base and Chloride
Total volume capacity, min.	eq/L	≥1.15 (25.1 kgr/ft^3)
Particle size		
Harmonic mean diameter	mm	0.700–0.980
Uniformity coefficient		≤1.8
< 0.355 mm	%	1 max
Moisture retention capacity	%	57–65
Shipping density**	g/L	660 (41 lbs/ft^3)

Suggested Operating Conditions

Maximum operating temperature	35°C
Minimum bed depth	1000 mm (preferably > 1400 mm)
Service flow rate	5–40 BV*/h
Regeneration	
Regenerant	NaOH
Level	40–70 g/L
Concentration	2–4%
Minimum contact time	30 minutes
Slow rinse	2 BV at regeneration flow rate
Fast rinse	4–8 BV at service flow rate

*1 BV (Bed Volume) = 1 m^3 solution per m^3 resin or 7.5 gals per ft^3 resin

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Hydraulic Characteristics

AMBERLITE™ IRA478RF Cl Resin gives a pressure drop of about 10 kPa/m bed depth per 10 m/h at 15°C (3.5 psi per 10 gpm/ft^2 at 60°F). A backwash flow rate of 7.5 m/h (3 gpm/ft^2) gives a bed expansion of about 70% at 15°C 60°F.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

DOW™ Ion Exchange Resins
For more information about DOW™ resins, call the Dow Water & Process Solutions business:
North America: 1-800-447-4369
Latin America: (+55) 11-5188-9222
Europe: (+32) 3-450-2240
Pacific: +60 3 7958 3392
Japan: +813 5460 2100
China: +86 21 2301 1000
http://www.dowwaterandprocess.com

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