PRODUCT DATA SHEET

AMBERLITE™ IRA67RF

Industrial Grade Weak Base Anion Exchanger

AMBERLITE IRA67RF resin is a weak base anion exchange resin with a gel type acrylic matrix. It has a high capacity, excellent physical stability, fast kinetics, outstanding resistance to organic fouling and basicity higher than that of polystyrenic weak base resins. The flexible acrylic structure of AMBERLITE IRA67RF resin allows for effective adsorption and desorption of naturally occurring organic molecules, such as humic and fulvic acids, that are present in many water supplies. The particle size distribution of AMBERLITE IRA67RF resin has been specifically selected to give optimum performance in packed bed and floating bed applications.

PROPERTIES

Physical form	Translucent white spherical beads
Matrix	Crosslinked acrylic gel structure
Functional group	Tertiary amine
Ionic form as shipped	Free Base (FB)
Total exchange capacity [1]	≥ 1.60 eq/L (FB form)
Moisture holding capacity [1]	56 to 64 % (FB form)
Shipping weight	660 g/L
Particle size	
Uniformity coefficient [1]	≤ 1.70
Harmonic mean size [1]	0.700 – 0.950 mm
< 0.355 mm [1]	0.5 % max
Reversible swelling	FB → Cl^- ≤ 30 %

[1] Contractual value

Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

Maximum operating temperature	60 °C
Minimum bed depth	700 mm
Service flow rate	5 to 40 BV*/h
Regeneration	
Regenerant	NaOH
Level	130 % of ionic load
Concentration	2 to 4 %
Minimum contact time	30 minutes
Slow rinse	2 BV at regeneration flow rate
Fast rinse	8 to 16 BV at 10 BV/h

** 1 BV (Bed Volume) = 1 m^3 solution per m^3 resin*

PERFORMANCE

Operating capacity

The actual exchange capacity of AMBERLITE IRA67RF resin depends on a number of factors :

- composition of water (particularly CO_2 and SO_4 content),
- specific flow rate,
- ionic load.

AMBERLITE IRA67RF resin offers an operating capacity 15 to 30 % higher than that of polystyrenic weak base resins.
The engineering data sheet EDS 0255 A provides information to calculate the operating capacity of AMBERLITE IRA67RF resin used in water treatment.

Regeneration

Optimum regeneration conditions correspond to a quantity of caustic soda equivalent to 120 to 140 % of the operating capacity. It is not recommended to use higher regeneration ratios, as the excess caustic soda might lead to an increase of the rinse water volume required. The latter can be minimized by recycling the rinse effluent through the upstream cation exchange resin.

Organic matter

The aliphatic structure of AMBERLITE IRA67RF resin gives it slightly less affinity for organic acids found in surface waters than polystyrene weak base resins. This weaker affinity combined with the flexible acrylic polymer structure allows for more complete elution of the organics from the resin. Therefore, AMBERLITE IRA67RF resin offers a large reversible capacity for the removal of organic matter.

HYDRAULIC CHARACTERISTICS

AMBERLITE IRA67RF resin gives a pressure drop of about 10 kPa/m bed depth per 10 m/h at 15 °C. A backwash flow rate of 6.5 m/h gives a bed expansion of about 65 % at 15 °C.

LIMITS OF USE

AMBERLITE IRA67RF resin is suitable for industrial water treatment. 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.

All our products are produced in ISO 9001 certified manufacturing facilities.

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