



AMBERLITE™ IRA67 Ion Exchange Resin

Gaussian, Acrylic, Gel, Weak Base Anion Exchange Resin for Industrial Demineralization Applications

Description

AMBERLITE™ IRA67 Ion Exchange Resin is a general-purpose demineralization resin with a long-established track record of reliable performance in the industry. This resin offers a good balance of high capacity, high stability and organic fouling resistance for co-flow regenerated systems in industrial water treatment.



Weak base anion resins are well-suited for use with strong base anion resins to improve overall efficiency and throughput of a demineralization system. Acrylic weak base anion resins effectively remove mineral acids as well as carbon dioxide and organics, reducing the ionic load on the strong base anion resin and also protecting it from organic fouling. The weak base anion resin increases a system's overall capacity to remove organics.

AMBERLITE IRA67 has exceptional physical stability and organic fouling resistance. The hydrophilic acrylic structure provides unique chemical and physical properties enabling the resin to be operated under continuous high load of natural organic compounds when temperatures do not consistently exceed 35°C (95°F).

Applications

- Demineralization, ideally when treating water with:
 - High organic fouling potential
 - High percentage of mineral acidity (FMA)
 - Relatively high remaining carbon dioxide content
 - System layouts without a degasifier

System Designs

- Co-current

Typical Physical and Chemical Properties**

Physical Properties	
Copolymer	Crosslinked acrylic
Matrix	Gel
Type	Weak base anion
Functional Group	Tertiary amine
Physical Form	White, translucent, spherical beads
Chemical Properties	
Ionic Form as Shipped	Free base (FB)
Total Exchange Capacity	≥ 1.60 eq/L (FB form)
Water Retention Capacity	56.0 – 62.0% (FB form)
Particle Size	
Particle Diameter §	500 – 750 μm
Uniformity Coefficient	≤ 1.80
< 300 μm	≤ 1.0%
> 1180 μm	≤ 5.0%
Stability	
Whole Uncracked Beads	≥ 95%
Swelling	FB → HCl ≤ 20%
Density	
Particle Density	1.07 g/mL
Shipping Weight	650 g/L

§ For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 177-01775).

Suggested Operating Conditions**

Temperature Range (FB form)	5 – 60°C (41 – 140°F)
pH Range	
Service Cycle	0 – 6
Stable	0 – 14

For additional information regarding recommended minimum bed depth, operating conditions, and regeneration conditions for [separate beds](#) (Form No. 177-03729) in water treatment, please refer to our Tech Fact.

Hydraulic Characteristics

Estimated bed expansion of AMBERLITE™ IRA67 Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AMBERLITE IRA67 as a function of service flowrate and temperature is shown in Figure 2. These pressure drop expectations are valid at the start of the service run with clean water and a well-classified bed.

Figure 1: Backwash Expansion

Temperature = 10 – 60°C (50 – 140°F)

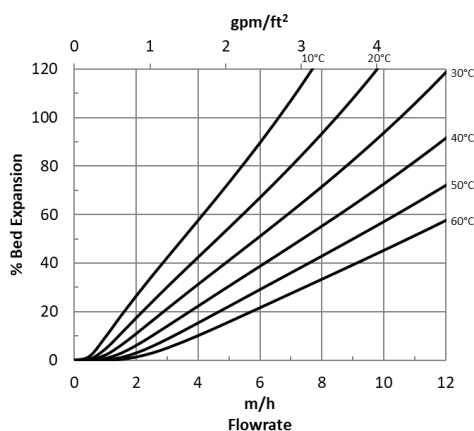
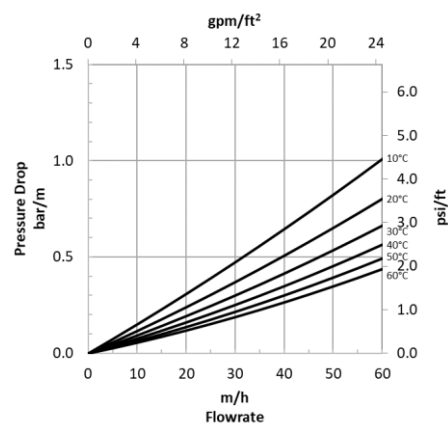


Figure 2: Pressure Drop

Temperature = 10 – 60°C (50 – 140°F)



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WARNING: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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