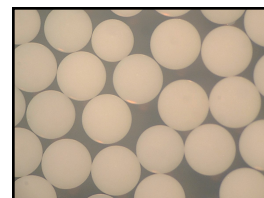


AmberLite™ IRA96 Ion Exchange Resin

Gaussian, Macroporous, Weak Base Anion Exchange Resin for Industrial Demineralization Applications

Description

AmberLite™ IRA96 Ion Exchange Resin is a general-purpose demineralization resin with a long-established track record of reliable performance in the industry. This durable resin offers a good balance of capacity and strength resulting in long lifetime 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. It effectively removes mineral acids 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™ IRA96 has excellent physical and thermal stability. The macroporous structure allows for easy release of natural organic molecules providing high organic fouling resistance.

Applications

- Demineralization, ideally when treating water with:
 - High organic fouling potential
 - High percentage of mineral acidity (FMA)
- Partial demineralization when weak acid removal is not required

System Designs

- Co-current

Typical Properties

| Physical Properties | |
|-----------------------------------|---------------------------------------|
| Copolymer | Styrene-divinylbenzene |
| Matrix | Macroporous |
| Type | Weak base anion |
| Functional Group | Tertiary amine |
| Physical Form | White to tan, opaque, spherical beads |
| Chemical Properties | |
| Ionic Form as Shipped | Free base (FB) |
| Total Exchange Capacity | ≥ 1.3 eq/L (FB form) |
| Water Retention Capacity | 59.0 – 65.0% (FB form) |
| Particle Size [§] | |
| Particle Diameter | 550 – 750 µm |
| Uniformity Coefficient | ≤ 1.6 |
| < 300 µm | ≤ 1.0% |
| > 1180 µm | ≤ 1.0% |
| Stability | |
| Whole Uncracked Beads | ≥ 95% |
| Swelling | FB → HCl : 15% |
| Density | |
| Particle Density | 1.05 g/mL |
| Shipping Weight | 670 g/L |

[§] For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 45-D00954-en).

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. 45-D01131-en) in water treatment, please refer to our Tech Fact.

Hydraulic Characteristics

Estimated bed expansion of AmberLite™ IRA96 Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite™ IRA96 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)

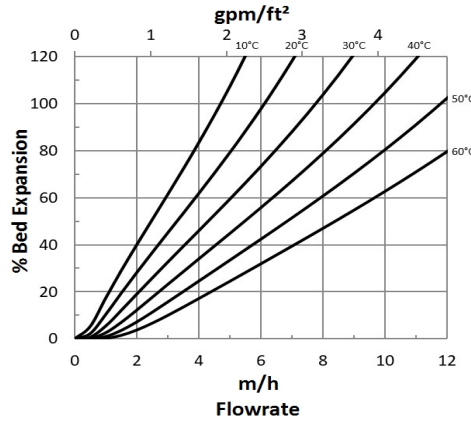
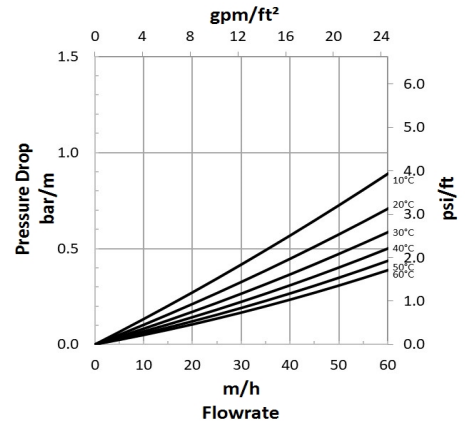


Figure 2: Pressure Drop
Temperature = 10 – 60°C (50 – 140°F)



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Please be aware of the following:

- **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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