



## Product Data Sheet

### **DuPont™ AmberLite™ IRA67 Ion Exchange Resin**

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

#### **Description**

DuPont™ 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 Properties

|                            |                                     |
|----------------------------|-------------------------------------|
| <b>Physical Properties</b> |                                     |
| Copolymer                  | Crosslinked acrylic                 |
| Matrix                     | Gel                                 |
| Type                       | Weak base anion                     |
| Functional Group           | Tertiary amine                      |
| Physical Form              | White, translucent, spherical beads |
| <b>Chemical Properties</b> |                                     |
| 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)              |
| <b>Particle Size</b> §     |                                     |
| Particle Diameter          | 500 – 750 µm                        |
| Uniformity Coefficient     | ≤ 1.80                              |
| < 300 µm                   | ≤ 1.0%                              |
| > 1180 µm                  | ≤ 5.0%                              |
| <b>Stability</b>           |                                     |
| Whole Uncracked Beads      | ≥ 95%                               |
| Swelling                   | FB → HCl ≤ 20%                      |
| <b>Density</b>             |                                     |
| 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. 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.

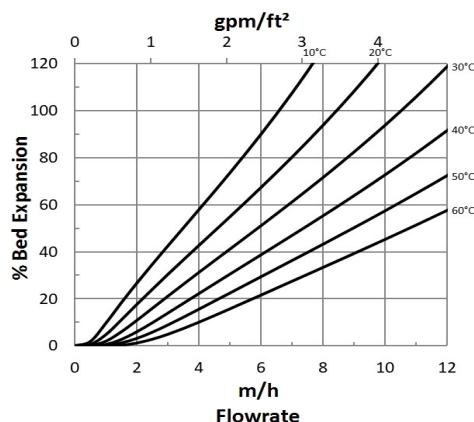
## Hydraulic Characteristics

Estimated bed expansion of DuPont™ 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.

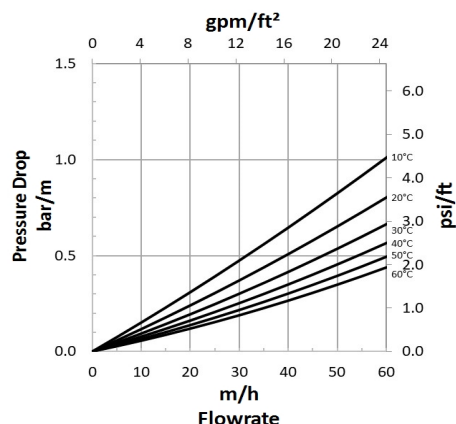
**Figure 1: Backwash Expansion**

Temperature = 10 – 60°C (50 – 140°F)



**Figure 2: Pressure Drop**

Temperature = 10 – 60°C (50 – 140°F)



## Product Stewardship

DuPont 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 DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

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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.

**Have a question? Contact us at:**

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