

Product Data Sheet

|                | DuPont <sup>™</sup> AmberLite <sup>™</sup> IRA910 CI Ion Exchange Resin<br>Macroporous, Strong Base Anion (Type II) Exchange Resin for Industrial<br>Demineralization Applications  |
|----------------|---|
| Description    | DuPont <sup>™</sup> AmberLite <sup>™</sup> IRA910 CI Ion Exchange Resin is a general-purpose<br>demineralization resin with a long-established track record of reliable performance in<br>co-flow regenerated industrial water treatment systems.   |
|                | The macroporous structure of AmberLite <sup>™</sup> IRA910 CI provides excellent resistance to organic fouling and physical stresses. When operated under challenging conditions, it allows increased resin lifetime in operation compared to a gel Type II resin.  |
|                | Compared to a Type I strong base anion resin, a Type II resin will yield greater operating capacity due to more complete regeneration. It is best-suited to treat water in which silica and carbon dioxide do not exceed 30% of the total anions and the service and caustic regeneration temperature does not consistently exceed 35°C (95°F). |
|                | For systems that require low silica in the effluent or that operate at higher<br>temperatures, a Type I strong base anion resin is recommended, such as<br>AmberLite™ IRA900 CI Ion Exchange Resin.   |
| Applications   | <ul> <li>Demineralization, when the treatment goal is:</li> <li>High organic fouling potential</li> <li>Removal of strong and weak acids</li> <li>Dealkalization</li> </ul>   |
| System Designs | Co-current  |

## **Typical Properties**

| Physical Properties        |                                      |
|----------------------------|--------------------------------------|
| Copolymer                  | Styrene-divinylbenzene               |
| Matrix                     | Macroporous                          |
| Туре                       | Strong base anion, Type II           |
| Functional Group           | Dimethylethanolammonium              |
| Physical Form              | Pale yellow, opaque, spherical beads |
| Chemical Properties        |                                      |
| Ionic Form as Shipped      | CI-                                  |
| Total Exchange Capacity    | ≥ 1.0 eq/L (Cl⁻ form)                |
| Water Retention Capacity   | 54.0 – 61.0% (Cl⁻ form)              |
| Particle Size <sup>§</sup> |                                      |
| Particle Diameter          | 530 – 800 μm                         |
| Uniformity Coefficient     | ≤ 1.80                               |
| < 300 µm                   | ≤2.0%                                |
| > 1180 µm                  | ≤ 5.0%                               |
| Stability                  |                                      |
| Whole Uncracked Beads      | ≥ 95%                                |
| Swelling                   | $CI^- \rightarrow OH^-$ : 15%        |
| Density                    |                                      |
| Particle Density           | 1.09 g/mL                            |
| Shipping Weight            | 700 g/L                              |
|                            |                                      |

§ For additional particle size information, please refer to the <u>Particle Size Distribution Cross Reference Chart</u> (Form No. 45-D00954-en).

## Suggested Operating Conditions

| Temperature Range    |                   | - |
|----------------------|-------------------|---|
| OH⁻ form             | 5–35°C (41–95°F)  |   |
| CI <sup>−</sup> form | 5–80°C (41–176°F) |   |
| pH Range             |                   |   |
| Service Cycle        | 1 – 14            |   |
| Stable               | 0-14              |   |

For additional information regarding recommended minimum bed depth, operating conditions, and regeneration conditions for <u>separate beds</u> (Form No. 45-D01131-en) in water treatment, please refer to our Tech Fact.

## Hydraulic Characteristics

Estimated bed expansion of DuPont<sup>™</sup> AmberLite<sup>™</sup> IRA910 CI Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AmberLite<sup>™</sup> IRA910 CI 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.



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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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