### Physical Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer Structure</td>
<td>Macroporous, acrylic-divinylbenzene</td>
</tr>
<tr>
<td>Functional Group</td>
<td>R-N-(CH$_3$)$_2$</td>
</tr>
<tr>
<td>Ionic Form as Shipped</td>
<td>Free Base</td>
</tr>
<tr>
<td>Physical Form</td>
<td>White, spherical beads</td>
</tr>
<tr>
<td>Screen Size Distribution</td>
<td>16 to 40 mesh, +16 mesh (U.S. Std.) Less than 2%</td>
</tr>
<tr>
<td></td>
<td>-40 mesh Less than 2%</td>
</tr>
<tr>
<td></td>
<td>-50 mesh Less than 1%</td>
</tr>
<tr>
<td>pH Range (operating)</td>
<td>0 to 9</td>
</tr>
<tr>
<td>Moisture Content</td>
<td>57 to 62%</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>44 lbs per cubic foot</td>
</tr>
<tr>
<td>Swelling</td>
<td>20% maximum</td>
</tr>
<tr>
<td>Total Capacity</td>
<td>2.75 eq/l minimum</td>
</tr>
<tr>
<td>Sphericity</td>
<td>95% minimum</td>
</tr>
</tbody>
</table>

### Recommended Operating Conditions

- **Maximum Temperature (H Form):** 105°F (40°C)
- **Bed Depth:** 30” minimum
- **Service Flow Rate:** 2 to 4 US GPM per cubic foot
- **Backwash Flow Rate:** 50 to 75% bed expansion
- **Regenerant Strength**
  - 2 to 4% NaOH
  - 0.5 to 1.0 US GPM per cubic foot
- **Regenerant Contact Time:** 30 minutes minimum
- **Regenerant Dosage Level:** 3 to 6 lbs NaOH per cubic foot
- **Displacement Rinse:** 0.5 to 1.0 US GPM per cubic foot
- **Displacement Rinse Volume:** 10 to 15 Gallons per cubic foot
- **Fast Rinse Rate:** 2 to 4 US GPM per cubic foot
- **Fast Rinse Volume:** 35 to 60 Gallons per cubic foot

*CAUTION: Do not mix ion exchange resins with strong oxidizing agents. Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

### WB-2 Features

**Organic Fouling Resistance and High Capacity**

Aldex WB-2 tertiary amine functionality plus its macroporous structure provides near stoichiometric regeneration efficiency and the ability to reversibly sorb naturally occurring organic substances that eventually foul all strongly basic resins. Aldex WB-2 can be used in multiple bed systems to protect strongly basic resins from fouling while decreasing regenerant consumption.

**Very low color, taste or odor**

Aldex WB-2 meets the requirements for paragraph 21CFR 173.25 of the Food Additive Regulation of the U.S. Food and Drug Administration.

**Superior Physical Stability**

95% plus sphericity and high crush strengths together with a very uniform particle size provide greater resistance to bead breakage while maintaining low pressure drop.

**Potable Water Applications**

The resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to ensure compliance with extractable levels.

### Safety Information

A material safety data sheet is available for Aldex WB-2. Copies can be obtained from Aldex Chemical Co., LTD. Aldex WB-2 is not a hazardous product and is not WHMIS controlled.

Caution: Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Before using strong oxidizing agents in contact with ion exchange resin, consult sources knowledgeable in the handling of these materials.
Pressure Drop
The graph below (Fig 1) shows the expected pressure loss per foot of bed depth as a function of flow rate, at various water temperatures.

![Graph showing Pressure Drop vs Flow Rate at various degrees Fahrenheit (F°)](image)

**Fig. 1 Pressure Drop vs Flow Rate at various degrees Fahrenheit (F°)**

Backwash Characteristics
Aldex WB-2 is supplied in the free base form which has the lowest density. When the resin is in the free base form, its expansion is greater than when it is exhausted and has a greater density. Always take care to backwash the resin so as to not lose resin while expanding the bed a minimum of 50% during backwash.

![Graph showing Expansion vs Flow Rate at various degrees Fahrenheit (F°)](image)

**Fig. 2 Expansion vs Flow Rate at various degrees Fahrenheit (F°)**

Operating Capacity
The exchange capacity of Aldex WB-2 is unaltered by changes in the composition of the influent water. A minimum capacity of 28 kilograms (as CaCO₃) per cubic foot may be expected with 3.0 lbs of sodium hydroxide per cubic foot.

Applications
**Demineralization**
Aldex WB-2 is generally intended to be used in multiple bed systems with high levels of strong acid ions such as sulfates and chlorides where its tremendous regeneration efficiency is best utilized.

Aldex WB-2 has the ability to reversibly sorb organic molecules like the naturally occurring humic and fulvic acids that are primarily responsible for organic fouling. It can be used as a separate bed, ahead of the strong base exchanger to remove organics and strong acid ions. When used in this scheme Aldex WB-2 protects the strongly basic exchanger from becoming fouled.