Resinex™ AP-21 is a high purity, premium grade, strongly basic macroporous anion exchange resin type 2. The macroporous crosslinked matrix offers a very high resistance to physical breakage and organic fouling. Its remarkable physical stability together with the low regenerant consumption makes it highly suitable for industrial applications especially for surface water treatment.

The selected bead distribution of Resinex™ AP-21 is especially adapted for all modern counter-current systems (i.e. Schwebebett, UPCORE...).

**Typical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Crosslinked polystyrene divinylbenzene</td>
</tr>
<tr>
<td>Form</td>
<td>Macroporous, milky white, spherical beads</td>
</tr>
<tr>
<td>Functional group</td>
<td>Quaternary amine, Type I</td>
</tr>
<tr>
<td>Whole bead count</td>
<td>96% min.</td>
</tr>
<tr>
<td>Ionic form, as shipped</td>
<td>Cl⁻</td>
</tr>
<tr>
<td>Bead size</td>
<td>0.42 - 1.25 mm</td>
</tr>
<tr>
<td>Uniformity coefficient</td>
<td>1.20 max.</td>
</tr>
<tr>
<td>Bulk density, as shipped</td>
<td>690 kg/m³</td>
</tr>
<tr>
<td>Real density</td>
<td>1.10 g/cm³</td>
</tr>
<tr>
<td>Water retention</td>
<td>47 - 57%</td>
</tr>
<tr>
<td>Total capacity (Cl⁻ form)</td>
<td>1.15 eq/l min.</td>
</tr>
<tr>
<td>Volume change Cl⁻ –&gt; OH⁻</td>
<td>15% max.</td>
</tr>
<tr>
<td>Stability, temperature</td>
<td>80°C max.</td>
</tr>
<tr>
<td>Stability, pH</td>
<td>0 - 14</td>
</tr>
</tbody>
</table>

**Key Features and Benefits**

- High Integrity Beads
  Excellent resistance to mechanical degradation ensures low pressure drop

- Excellent Resistance To Organic Fouling
  Removable organics

- Superior Regeneration Efficiency
  Low regenerant consumption

- Selected Bead Size
  Lower pressure drop and regenerant consumption

**Typical Applications**

- Demineralisation in industrial water treatment systems, especially in the presence of high organic loadings

- Demineralisation and polishing when used in combination with Resinex™ K-8

**Standard Design Conditions**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed depth</td>
<td>&gt; 700 mm</td>
</tr>
<tr>
<td>Service flow rate</td>
<td>8 - 55 BV/h</td>
</tr>
<tr>
<td>Backwash expansion</td>
<td>50 - 75%</td>
</tr>
</tbody>
</table>

**Standard Packaging**

- 25 ft. PE valve bag
- 1000 litre big bag
Resinex™ AP-21
Strong base anion exchange resin

Pressure Drop

Backwash Expansion

Standard Regeneration Parameters

Co-Flow

Counter-Flow

Concentration
4% NaOH
2% NaOH

Level
80-130 g/l
55-75 g/l

Flow rate regenerant
4-6 BV/h
6-8 BV/h

Contact time regenerant
30-60 min.
20-40 min.

Flow rate slow rinse
4-6 BV/h
6-8 BV/h

Flow rate fast rinse
10-30 BV/h
10-30 BV/h

Flow rate required
2-4 BV
2 BV

Fast rinse water required
6-10 BV
6-10 BV

The use of a weak base solution such as ammonia or sodium carbonate as a regenerant is an alternative to caustic soda. Please contact your nearest Jacobi Carbons sales office for further information.

Product Packing

25 lit. polyethylene valve bag
48 bags per pallet

Polypropylene FBCs
(big bag), 1.000 lit.

CAUTION: Strong oxidizing agents such as nitric acid can react violently with ion exchange resins and cause explosive type reactions. Before using strong oxidants, consult sources knowledgeable in the handling of these materials.