ResinTech SIR-100-HP is a chloride form macroporous nitrate selective strong base anion resin. It has been Gold Seal Certified by the WQA for use with potable water. Its unique functionality increases the selectivity for nitrate and decreases selectivity for sulfate, often resulting in higher operating capacity and lower leakage than type 1 or type 2 anion resins. SIR-100-HP is intended for the removal of nitrate and/or perchlorate from otherwise potable water.

### APPLICATIONS
- Nitrate Removal
- Perchlorate Removal

### TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer Matrix</td>
<td>Styrenic Macroporous</td>
</tr>
<tr>
<td>Ionic Form</td>
<td>Chloride</td>
</tr>
<tr>
<td>Functional Group</td>
<td>Triethylamine</td>
</tr>
<tr>
<td>Physical Form</td>
<td>Spherical Beads</td>
</tr>
<tr>
<td>Particle Size</td>
<td>16 to 50 US Mesh (297 - 1190µm)</td>
</tr>
<tr>
<td>% &lt; 50 mesh (300µm)</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>Minimum Sphericity</td>
<td>95%</td>
</tr>
<tr>
<td>Uniformity Coefficient</td>
<td>1.6</td>
</tr>
<tr>
<td>Reversible Swelling</td>
<td>Cl to No₃ -5% to -10%</td>
</tr>
<tr>
<td>Temp Limit</td>
<td>250°F (121°C)</td>
</tr>
<tr>
<td>Capacity (meq/mL)</td>
<td>1.0</td>
</tr>
<tr>
<td>Moisture Retention</td>
<td>46% to 65%</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>40 - 42 lbs/ft³ (641 - 673 g/L)</td>
</tr>
<tr>
<td>Color</td>
<td>White to Tan</td>
</tr>
<tr>
<td>Regenerability</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### CERTIFICATIONS
- WQA Gold Seal*

### PACKAGING OPTIONS
- 500 ml samples
- 1 ft³ bags
- 1 ft³ boxes
- 1 ft³ drums
- 7 ft³ drums
- 42 ft³ supersacks

* NSF/ANSI/CAN 61: Drinking Water System Components - Health Effects

Revision 1.1
ResinTech, Inc.
PRODUCT TECHNICAL DATA

SIR-100-HP

HYBRID

NITRATE SELECTIVE

POLYSTYRENIC MACROPOROUS

CHLORIDE FORM

NITRATE REMOVAL

ResinTech SIR-100-HP is used in the chloride form to remove nitrates from potable water. It has a unique amine functional group that eliminates the possibility of nitrate dumping. SIR-100-HP has reduced affinity for sulfate which provides high operating capacity and efficient regeneration.

When treating waters with high hardness the brine dilution and displacement waters should be softened and a low hardness salt used to prevent scaling.

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature
Chloride form 170°F
Minimum bed depth 24 inches
Backwash expansion 25 to 50 percent
Maximum pressure loss 20 psi
Operating pH range 4 to 10 SU
Regenerant Concentration
Salt cycle 5 to 10 percent NaCl
Regenerant level >10 lbs/cu.ft.
Regenerant flow rate 0.25 to 1.0 gpm/cu.ft.
Regenerant contact time >30 minutes
Displacement flow rate Same as dilution flow
Displacement volume 10 to 15 gallons/cu.ft.
Rinse flow rate Same as service flow
Rinse volume 35 to 60 gallons/cu.ft.
Service flow rate Average flow 1 to 4 gpm/cu.ft.
Peak Flow <10 gpm/cu.ft.

Capacity and leakage based on 10% NO₃ and 40% SO₄ in the feed and 35.7 ppm NO₃ endpoint (all as CaCO₃). Capacity and leakage are for nitrate alone. TDS is for total anions as CaCO₃. No engineering downgrade has been applied.

Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.

For operation outside these guidelines, contact ResinTech Technical Support.