

# PRODUCT SPECIFICATION SHEET

## SUPRA SIR-900

SELECTIVE EXCHANGER

**FLUORIDE & ARSENIC SELECTIVE  
ZEOLITE CRYSTALLINE ADSORBANT  
ALUMINUM OXIDE FORM**

ResinTech SIR-900 is a granular aluminum oxide-based adsorbent. It has a strong adsorptive capacity for a variety of contaminants including lead, arsenate, and selenate.

SIR-900 is intended for the removal of fluoride from water and can also be used for the removal of arsenate, selenate, and lead from potable water.

### APPLICATIONS

- Fluoride Removal
- Arsenic Removal
- Lead Removal

### TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS

<b>Polymer Matrix</b>	Zeolite Crystalline
<b>Ionic Form</b>	Aluminum Oxide
<b>Fuctional Group</b>	Aluminum Oxide
<b>Physical Form</b>	Flakey Granules
<b>Particle Size</b>	16 to 50 US Mesh (297 - 1190 µm)
<b>% &lt; 50 mesh (300µm)</b>	< 1%
<b>Uniformity Coefficient</b>	2.2
<b>Temp Limit</b>	212°F (100°C)
<b>Moisture Retention</b>	0% to 10%
<b>Shipping Weight</b>	37 - 39 lbs/ft <sup>3</sup> (593 - 625 g/L)
<b>Color</b>	White
<b>Regenerability</b>	Yes

### PACKAGING OPTIONS

- 500 ml samples
- 1 ft<sup>3</sup> drums
- 1 ft<sup>3</sup> bags
- 7 ft<sup>3</sup> drums
- 1 ft<sup>3</sup> boxes
- 42 ft<sup>3</sup> supersacks

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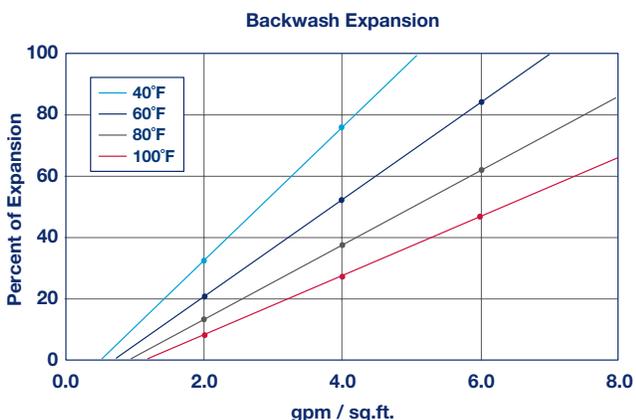
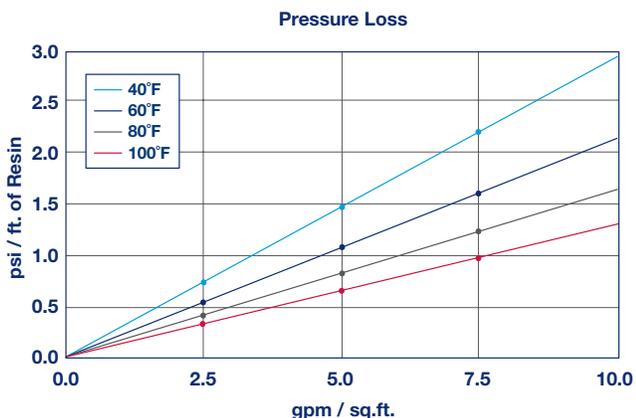


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### FLUORIDE REMOVAL

Fluoride is removed by ResinTech SIR-900 by a chemical reaction which is flow and pH sensitive. The best results are obtained when the flow is limited to about 1 gpm/cu.ft. and the pH is held at 5.5. Higher flows and higher or lower pH results in loss of capacity. Leakage of fluoride is generally less than 0.1 mg/L to breakthrough. SIR-900 can be regenerated with sodium hydroxide, followed by neutralization with acid at a pH of 5-6.

### ARSENIC REMOVAL

Inorganic arsenic (arsenate) can be removed by ResinTech SIR-900. The process is pH sensitive and capacity decreases when the pH is below 5.5 or above 6.0. Arsenite is not removed nearly as well as arsenate, therefore pre-oxidation may be required.

### LEAD REMOVAL

Dissolved lead is adsorbed by ResinTech SIR-900. This process is not dramatically affected by flow rate, temperature or TDS. However, pH should be maintained above 6.0 as lead removal drops under acidic conditions, and below 10 as lead precipitates under basic conditions.

### SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	212°F
Minimum bed depth	36 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	4 to 10 SU
Service flow rate	
Continuous	1 to 2 gpm/cu.ft.
Intermittent	1 to 5 gpm/cu.ft.

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

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