

## SUPRA SIR-700-HP

SELECTIVE EXCHANGER

**CHROMATE SELECTIVE  
HIGH-PURITY GRADE  
EPOXY POLYAMINE GEL  
ACID CHLORIDE FORM**

ResinTech SIR-700-HP is an acid salt form granular gel weak base anion resin. The HP designation means it is Gold Seal Certified by the WQA for use in potable water applications. Its unique functionality utilizes a secondary mechanism for chromate removal that causes chromium to precipitate inside the resin matrix when the feed pH is slightly acidic. SIR-700-HP is intended for all chromate removal applications.

### APPLICATIONS

- Chromate Removal
- Vanadium Removal

### TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS

<b>Polymer Matrix</b>	Epoxy Polyamine Gel
<b>Ionic Form</b>	Acid Salt
<b>Functional Group</b>	Mixed Amines
<b>Physical Form</b>	Spherical Beads
<b>Particle Size</b>	12 to 40 US Mesh (400 - 1680 µm)
<b>% &lt; 50 mesh (300µm)</b>	< 1%
<b>Uniformity Coefficient</b>	2.0
<b>Temp Limit</b>	212°F (100°C)
<b>Capacity (meq/mL)</b>	2.1
<b>Moisture Retention</b>	52% to 58%
<b>Shipping Weight</b>	39 - 41 lbs/ft <sup>3</sup> (625 - 657 g/L)
<b>Color</b>	Light Orange

### CERTIFICATIONS

WQA Gold Seal



C US

### 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

Revision 1.0

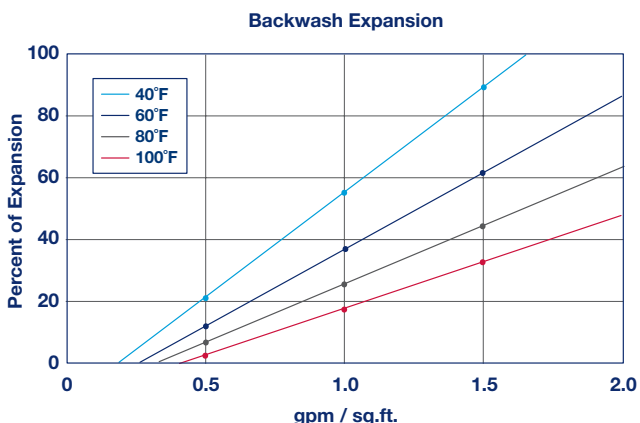
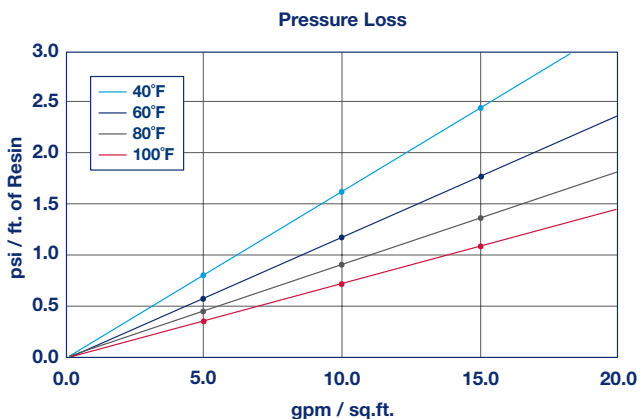
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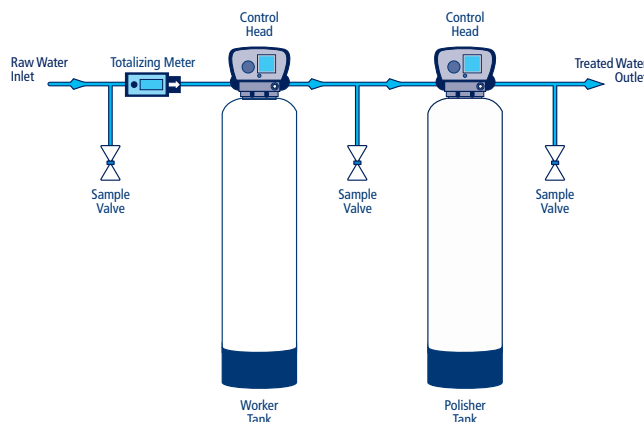


## CHROMATE REMOVAL

ResinTech SIR-700-HP is a unique weak base anion exchanger with a secondary hybrid capture mechanism for chromate. Under neutral to slightly acidic conditions, chromate is first exchanged into the resin, then reduced to trivalent chrome which covalently bonds to the resin backbone. Throughput capacity is many times greater than that provided by the ion exchange groups alone, allowing very high loading and infrequent change-outs. Because the hexavalent chromate reduction step is both time and pH dependent, it is the rate controlling step. Operation at pH greater than 6 requires low flow rates, rest periods, or

periodic soak steps at lower pH to allow the reduction step to catch up. Capacities in excess of 5 lbs of chrome (as Cr) per cu. ft. of media are routinely achieved with SIR-700-HP when operated at optimum pH and flow conditions. SIR-700-HP is not affected by common ions such as nitrate, sulfate, or chloride but can be damaged or fouled by high levels of suspended solids, iron, manganese, chlorine, etc.

## SUGGESTED SYSTEM CONFIGURATION FOR SIR-700-HP



## SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	100°F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	20 psi
Operating pH range	4 to 7 SU
Service flow rate	1 to 4 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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