

## SUPRA SIR-110-MP-HP

SELECTIVE EXCHANGER

**PFAS, NITRATE, & PERCHLORATE SELECTIVE  
POLYSTYRENIC MACROPOROUS  
CHLORIDE FORM**

ResinTech SIR-110-MP-HP is a chloride form nitrate and perchlorate selective macroporous strong base anion resin. Its unique functionality greatly increases the selectivity for nitrate while greatly decreasing the interference from sulfate ions. Despite having a lower capacity than SIR-110-HP, it also has faster kinetics and can be used at shorter EBCT. SIR-110-MP-HP is recommended for the removal of perchlorate, nitrate, and some PFAS compounds.

### APPLICATIONS

- Perchlorate Removal
- Nitrate Removal
- Iodide Removal
- Pertechnetate Removal
- PFAS Removal



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TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS	
<b>Polymer Matrix</b>	Styrenic Macroporous
<b>Ionic Form</b>	Chloride
<b>Functional Group</b>	Tributylamine
<b>Physical Form</b>	Spherical Beads
<b>Particle Size</b>	16 to 50 US Mesh (297 - 841 μm)
<b>% &lt; 50 mesh (300μm)</b>	< 1%
<b>Minimum Sphericity</b>	95%
<b>Uniformity Coefficient</b>	1.6
<b>Reversible Swelling</b>	Cl to NO <sub>3</sub> -5% to -10%
<b>Temp Limit</b>	250°F (121°C)
<b>Capacity (meq/mL)</b>	0.6
<b>Moisture Retention</b>	43% to 58%
<b>Shipping Weight</b>	40 - 42 lbs/ft <sup>3</sup> (641 - 673 g/L)
<b>Color</b>	White to Tan
<b>Regenerability</b>	Yes*

\* Exception: currently non-regenerable for PFAS removal applications.

### CERTIFICATIONS

WQA Gold Seal\*

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

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### PACKAGING OPTIONS

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

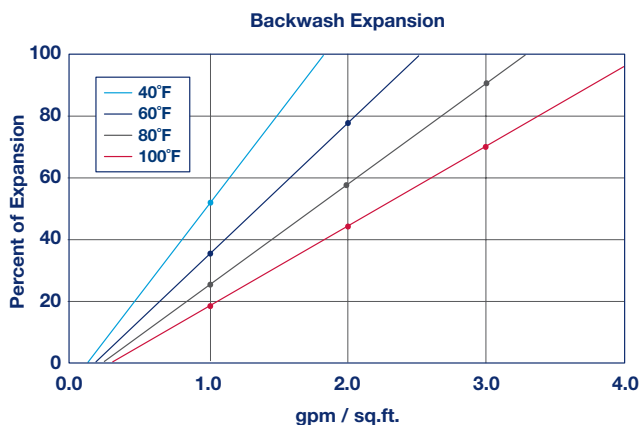
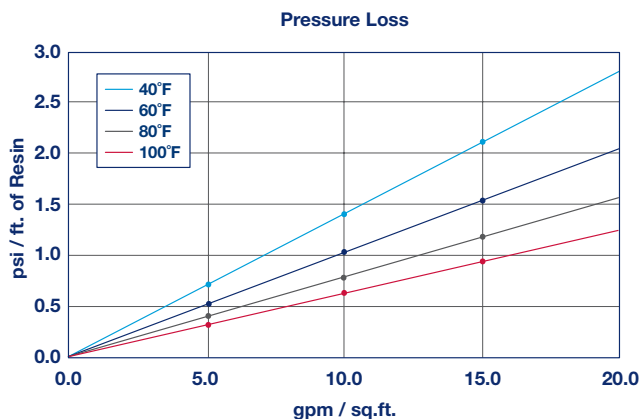


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### PFAS REMOVAL

ResinTech SIR-110-MP-HP can be used for removal of various PFAS compounds, including PFOA and PFOS, from water. Currently, this is a non-regenerable application. Testing has shown it can remove a wide range of other PFAS species in addition to these compounds. Ion exchange offers the benefit of reduced contact times and longer throughputs vs. conventional activated carbon treatment. An understanding of the influent water chemistry is needed for thorough review. Levels of TOC, VOC and individual

PFAS compounds are needed in addition to the basic background water chemistry (chloride, sulfate, alkalinity, etc.). Any other contaminants that may be present are also needed to determine impact on PFAS removal (uranium, perchlorate, chromate, arsenic, etc.).

### PERCHLORATE REMOVAL

ResinTech SIR-110-MP-HP is ideal for single use perchlorate removal applications and is a cost effective method to remove trace levels of perchlorate from water. The perchlorate ion is very strongly attracted to the ResinTech SIR-110-MP-HP, so much so that regeneration is impractical or impossible. However, in most cases perchlorate loads to almost the full capacity of the resin, resulting in very long life and eliminating the need to regenerate and re-use the spent resin.

### SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	170°F
Chloride form	
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	1 - 4 gpm/cu.ft. (8 - 32 BV/h)

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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