

## SIR-110-HP

**PFAS & Perchlorate selective, strong base type 1 anion, styrene/DVB gel, high purity, buffered chloride form**

ResinTech SIR-110-HP is a buffered chloride form perchlorate, nitrate, and PFAS selective gel strong base anion resin. The HP designation means it is Gold Seal Certified by the WQA for use in potable water applications. The buffered chloride form mitigates the pH drop at startup. Its unique functionality greatly increases the selectivity for nitrate while greatly decreasing the interference from sulfate ions. SIR-110-HP is recommended for the removal of perchlorate, nitrate, and most PFAS compounds.



### FEATURES & BENEFITS

- Buffered Chloride form for pH control
- Highest Operating Capacity
- Low Sulfate Selectivity
- Superior Physical Stability
- Controlled Particle Size

### APPLICATIONS

- Drinking Water Purification
- Cartridge Applications
- Iodide Removal
- Nitrate Removal
- Pertectnetate Removal
- Perchlorate Removal
- PFAS Removal



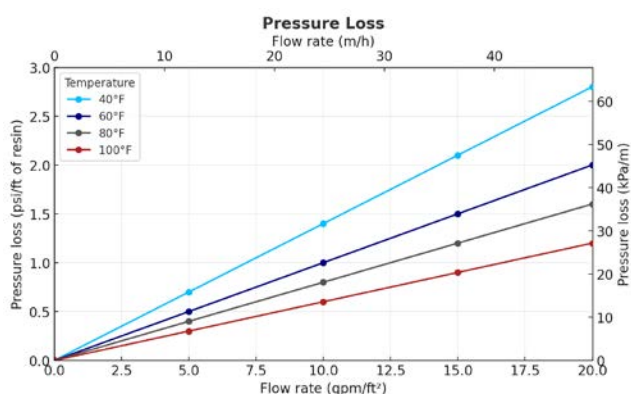
Meets NSF/ANSI/CAN 61  
Meets NSF/ANSI/CAN 372

REACH Registered

SIR-110-HP

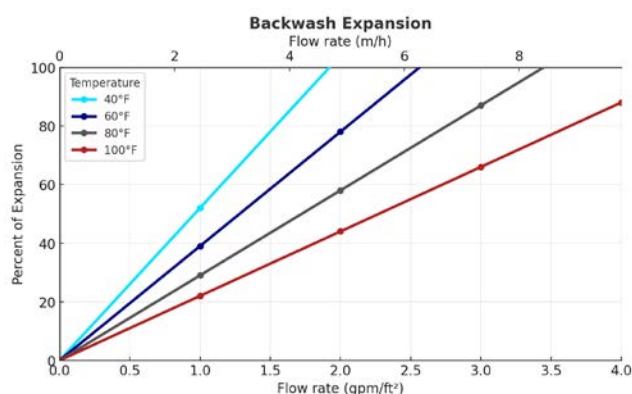
Polymer Matrix	Styrene/DVB	Reversible Swelling	Cl → No <sub>3</sub> -5 to -10%
Polymer Type	Gel	Uniformity	Gaussian
Ionic Form (as shipped)	Buffered Chloride (Cl <sup>-</sup> )	Uniformity Coefficient	1.60
Functional Group	Tributylamine	Capacity (meq/mL)	0.80
Physical Form	Spherical Beads	Moisture Retention (%)	38 to 50
Particle Size US Mesh (µm)	20 (841) to 50 (297)	Shipping Weight	40 - 42 lbs/cu.ft. (641 - 673 g/L)
< 50 mesh (300 µm) %	< 1.5%	Color	White to Tan
Minimum Sphericity (%)	90	Regenerable	Regenerable

**PRESSURE LOSS**



The graph above shows the expected pressure loss of ResinTech SIR-110-HP per foot of bed depth as a function of flow rate at various temperatures.

**BACKWASH EXPANSION**



The graph above shows the expansion characteristics of ResinTech SIR-110-HP as a function of flow rate at various temperatures.

**SUGGESTED OPERATING CONDITIONS**

Maximum Temperature	250°F (121°C)	Flow Rate	
Minimum Bed Depth	24 in. (61.0 cm)	Working Service	1-3 gpm/cu.ft. (8-24 BV/h)
Maximum Pressure Loss	20 psi (138 kPa)	PFAS	2.0-4.0 gpm/cu.ft. (16-32 BV/h)
Operating pH Range	4.0 to 10.0		



**PFAS REMOVAL**

ResinTech **SIR-110-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.).

**Recommended Service Flow Rate:** 2-4 gpm/CuFt.

**NITRATE REMOVAL**

ResinTech **SIR-110-HP** can be used in the buffered chloride form to remove nitrates as well as perchlorate from potable water. **SIR-110-HP** has higher capacity for nitrate than **SIR-110-HP** in high TDS waters. When treating waters with high hardness the brine dilution and displacement waters should be softened and a low hardness salt used to prevent scaling.

**PERCHLORATE REMOVAL**

ResinTech **SIR-110-HP** is ideal for single use perchlorate removal applications and is a cost effective method to remove trace levels of these contaminants from water. These compounds are very strongly attracted to the ResinTech **SIR-110-HP**, so much so that regeneration is impractical or impossible. However, in most cases the ions can load 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.

**Recommended Service Flow Rate:**1-3 gpm/CuFt

**IODIDE REMOVAL**

ResinTech **SIR-110-HP** has much higher selectivity for iodide than other strong base anion resins (about 7 to 10 times higher). This high selectivity allows for single use removal of iodide against rather high concentrations of other ions with reasonable throughput capacity. Regeneration, although possible, is complicated, and cannot be accomplished with salt or other common regenerants.

**REGENERATION DETAILS**

Salt Cycle (NaCl)	10 to 15%
Regenerant Level	3-10 lbs/cu.ft. (48.1-160.2 g/L)
Regenerant Flow Rate	0.25-1.0 gpm/cu.ft. (2-8 BV/h)
Regenerant Contact Time	> 30 minutes

Displacement Flow Rate	Same as dilution water
Displacement Volume	10-15 gals/cu.ft. (1-2 BV)
Rinse Flow Rate	Same as service flow
Rinse Volume	35-60 gals/cu.ft. (5-8 BV)

NaCl Regeneration applicable for Nitrate Removal applications only

**PACKAGING**

**Standard**

1 cu.ft. Bag | 7 cu.ft. Drum  
42 cu.ft. Supersack | 5 cu.ft. Drum

**Metric**

1000L Supersack | 140L Drum

**RELATED FILTERS**

AF-XX-3610



**SAFETY DATA SHEETS (SDS)**

Safety Data Sheets (SDS) are available for all products on the ResinTech website. They contain important health and safety information that may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used.

These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents; further we assume no liability for the consequences of any such actions.

Safety Data Sheets (SDS) are available at [resintech.com](https://www.resintech.com)

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