

SIR-100-HP

Nitrate selective, strong base anion, styrene/DVB macroporous, high purity, chloride form

ResinTech SIR-100-HP is a chloride form nitrate selective strong base anion resin. It has been Gold Seal Certified by the WQA for use in potable water applications. Its unique functionality increases the selectivity for nitrate and decreases selectivity for sulfate, 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 and has been screened for low taste and odor.



FEATURES & BENEFITS

- Highest Operating Capacity
- Efficient Brine Regeneration
- Low Sulfate Selectivity
- Superior Physical Stability
- Controlled Particle Size

APPLICATIONS

- Cartridge Applications
- Nitrate Removal
- Perchlorate Removal



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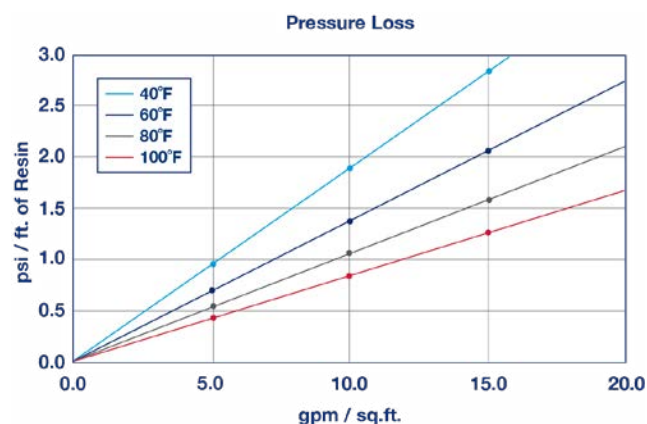
Meets NSF/ANSI/CAN 61

Meets NSF/ANSI/CAN 372

SIR-100-HP

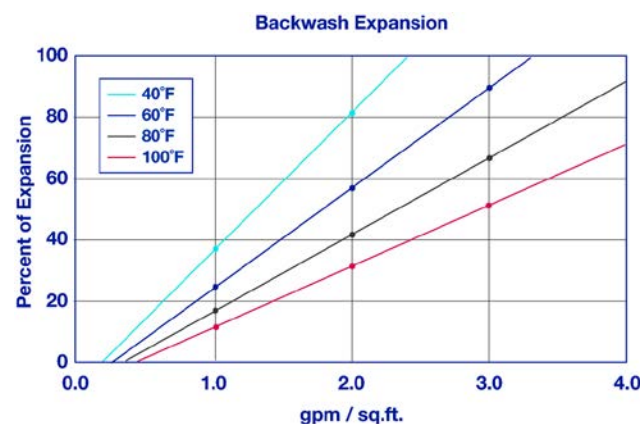
Polymer Matrix	Styrene/DVB	Reversible Swelling	Cl → No ₃ -5 to -10%
Polymer Type	Macroporous	Uniformity	Gaussian
Ionic Form (as shipped)	Chloride (Cl ⁻)	Uniformity Coefficient	1.60
Functional Group	Triethylamine	Capacity (meq/mL)	0.90
Physical Form	Spherical Beads	Moisture Retention (%)	46 to 56
Particle Size US Mesh (µm)	16 (1190) to 50 (297)	Shipping Weight	40 - 42 lbs/cu.ft. (641 - 673 g/L)
< 50 mesh (300 µm) %	< 1%	Color	White to Tan
Minimum Sphericity (%)	95	Regenerable	Regenerable

PRESSURE LOSS



The graph above shows the expected pressure loss of ResinTech SIR-100-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-100-HP as a function of flow rate at various temperatures.

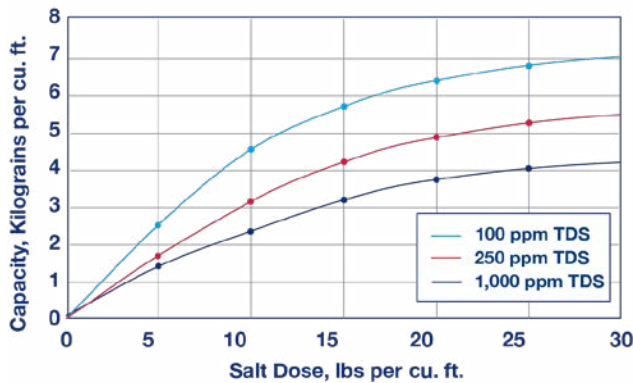
SUGGESTED OPERATING CONDITIONS

Maximum Temperature	250°F (121°C)	Flow Rate	
Minimum Bed Depth	24 in. (61.0 cm)	Working Service	1-4 gpm/cu.ft. (8-32 BV/h)
Operating pH Range	4.0 to 10.0		



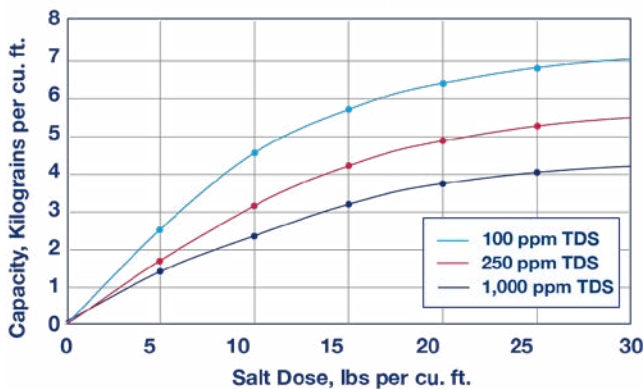
CAPACITY GRAPH 1

SIR-100-HP Capacity for Nitrate



Capacity and leakage data are based on the following: 2:1 Ca:Mg ratio, 500 ppm TDS as CaCO3, 0.2% hardness in the salt and 10% brine concentration applied co-currently through the resin over 30 minutes. No engineering downgrade has been applied.

SIR-100-HP Capacity for Nitrate



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.

PERCHLORATE REMOVAL

ResinTech SIR-100-HP can be used for the removal of perchlorate from groundwater supplies. The perchlorate ion is so strongly attached to the resin, making regeneration impractical, and so the resin is typically used as a once-through media in these applications.

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.

REGENERATION DETAILS

Salt Cycle (NaCl)	10 to 15%	Displacement Flow Rate	Same as dilution water
Regenerant Level	3-10 lbs/cu.ft. (48.1-160.2 g/L)	Displacement Volume	10-15 gals/cu.ft. (1-2 BV)
Regenerant Flow Rate	0.25-1.0 gpm/cu.ft. (2-8 BV/h)	Rinse Flow Rate	Same as service flow
Regenerant Contact Time	> 30 minutes	Rinse Volume	35-60 gals/cu.ft. (5-8 BV)

PACKAGING

Standard

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

Metric

140L Drum | 1000 L Supersack

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

