

SIR-100

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

ResinTech SIR-100 is a chloride form macroporous nitrate selective strong base anion resin. Its unique functionality increases the selectivity for nitrate and decreases selectivity for sulfate, often resulting in higher operating capacity and lower leakage than type 1 or type 2 anion resins. SIR-100 is intended for the removal of nitrate and/or perchlorate from otherwise potable water.



FEATURES & BENEFITS

- Highest operating capacity efficient brine regeneration
- Low sulfate selectivity
- Superior physical stability
- Controlled particle size

APPLICATIONS

- Cartridge Applications
- Nitrate Removal
- Perchlorate Removal



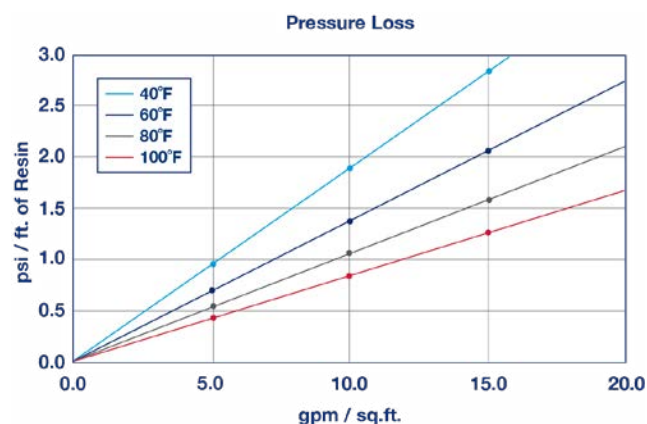
Meets NSF/ANSI/CAN 61

Meets NSF/ANSI/CAN 372

SIR-100

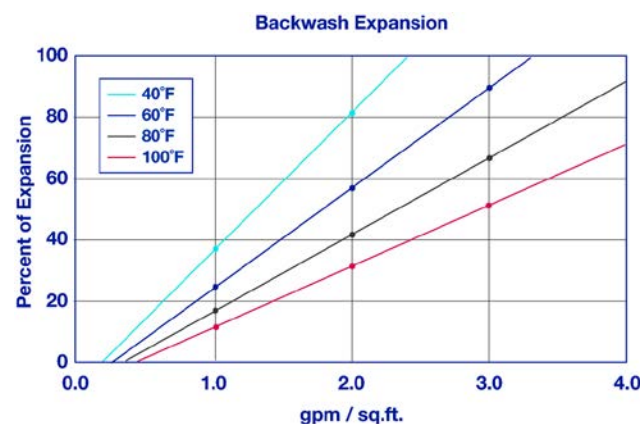
Polymer Matrix	Styrene/DVB	Reversible Swelling	Cl → No ₃ -5 to -10%
Polymer Type	Macroporous	Uniformity	Gaussian
Ionic Form (as shipped)	Chloride (Cl ⁻)	Uniformity Coefficient	1.60
Functional Group	Triethylamine	Capacity (meq/mL)	0.90
Physical Form	Spherical Beads	Moisture Retention (%)	46 to 56
Particle 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 per foot of bed depth as a function of flow rate at various temperatures.

BACKWASH EXPANSION

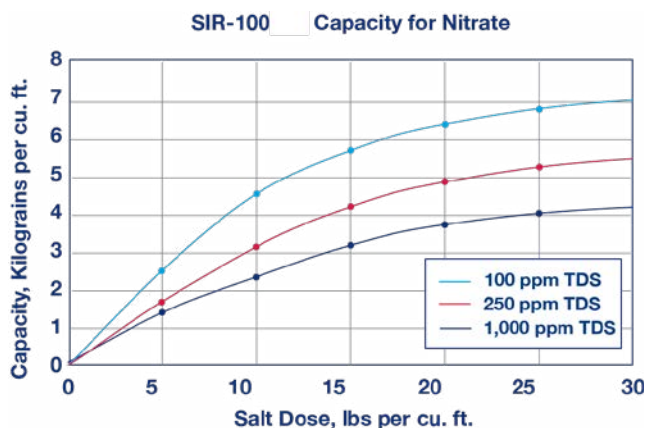


The graph above shows the expansion characteristics of ResinTech SIR-100 as a function of flow rate at various temperatures.

SUGGESTED OPERATING CONDITIONS

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





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** 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.

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
 42 cu.ft. Supersack | 5 cu.ft. Drum

Metric

1000L Supersack | 140L Drum

NITRATE REMOVAL

ResinTech **SIR-100** 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** 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.

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)

Page 4 of 4

Last Update: 17-Apr-26

