

SUPRA SIR-1200

SELECTIVE EXCHANGER

**RADWASTE & METAL SELECTIVE
POLYSTYRENIC GEL
CHLORIDE FORM**

ResinTech SIR-1200 is a chloride form type 1 gel strong base anion resin. It has an exceptionally high capacity and is optimized for mining and single-use applications. SIR-1200 is intended for use in uranium removal as well as the removal of other trace contaminants such as chromate and arsenate.

APPLICATIONS

- Radwaste Removal
- Precious Metal Recovery
- Trace Contaminants (U, Cr, As, Se, F, ClO₄, ClO₃)
- Molybdate Removal

TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS	
Polymer Matrix	Styrenic Gel
Ionic Form	Chloride
Functional Group	Trimethylamine
Physical Form	Spherical Beads
Particle Size	16 to 50 US Mesh (297 - 1190µm)
% < 50 mesh (300µm)	< 1%
Minimum Sphericity	95%
Uniformity Coefficient	1.6
Reversible Swelling	Cl to NO ₃ -3% to -7%
Temp Limit	250°F (121°C)
Capacity (meq/mL)	1.5
Moisture Retention	43% to 50%
Shipping Weight	42 - 44 lbs/ft ³ (673 - 705 g/L)
Color	White to Yellow
Regenerability	Yes

PACKAGING OPTIONS

- 500 ml samples
- 1 ft³ bags
- 1 ft³ boxes
- 1 ft³ drums
- 7 ft³ drums
- 42 ft³ supersacks

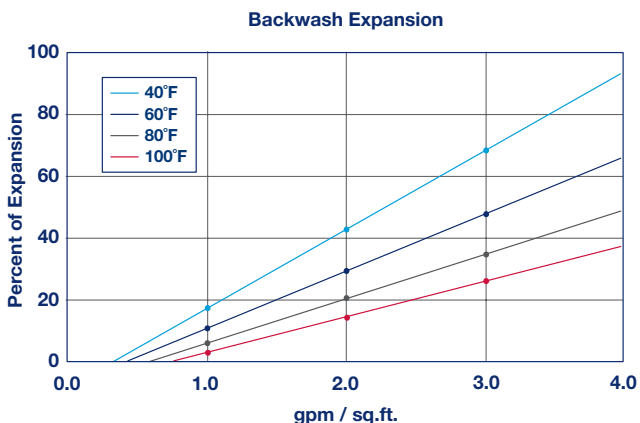
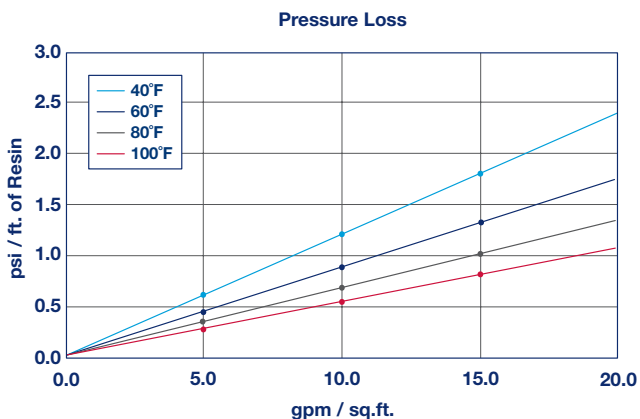
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CHELATING RESIN

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TRACE CONTAMINANT REMOVAL (U, CR, AS, SE, CLO₄)

ResinTech SIR-1200 has high capacity and can be used to remove a variety of trace contaminants, even when that contaminant is not highly preferred compared to the other bulk ions in the feedwater. Useful capacities are obtained when the feedwater TDS is substantially less than the resin's internal TDS. Uranium, chromate, and perchlorate are particularly well removed. Arsenate and selenate are well removed but can be chromatographically displaced by sulfate and other ions.

RADWASTE

ResinTech SIR-1200 is ideally suited for radwaste applications requiring the removal of radioactive anions, especially when the feed is significantly radioactive. The high crosslinking content of SIR-1200 gives it improved resistance to chemical damage caused by ionizing radiation.

PRECIOUS METAL REMOVAL

ResinTech SIR-1200 has high capacity for precious metals, when those metals are present as anions or as anionic complexes. SIR-1200 will remove traces of precious metal cyanides from plating rinse waters, allowing the recovery of the metal by incineration. Photographic wastes containing silver can be removed and the silver "fixed" to the resin by regeneration with sulfuric acid.

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
Chloride form	170°F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	20 psi
Operating pH range	0 to 14 SU
Regenerant Concentration	
Salt cycle	2 to 6 percent NaCl
Regenerant level	4 to 10 lbs./cu.ft.
Regenerant flow rate.	0.25 to 1.0 gpm/cu.ft.
Regenerant contact time	>40 minutes
Displacement flow rate	Same as dilution water
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 to 10 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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