

SUPRA

SIR-200

SELECTIVE EXCHANGER

**MERCURY SELECTIVE
POLYSTYRENIC MACROPOROUS
HYDROGEN FORM**

ResinTech SIR-200 is a mercury selective hydrogen form macroporous very weakly acidic cation resin. Its unique functionality makes it selective for mercury and other heavy metals as well as for noble metals when present as cations. SIR-200 is intended for mercury removal and the removal/recovery of various precious metals.

APPLICATIONS

- Mercury Removal
- Precious Metals

TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS

Polymer Matrix	Styrenic Macroporous
Ionic Form	Hydrogen
Functional Group	Thiol
Physical Form	Spherical Beads
Particle Size	16 to 50 US Mesh (297 - 1190µm)
% < 50 mesh (300µm)	< 1%
Minimum Sphericity	95%
Uniformity Coefficient	1.6
Temp Limit	250°F (121°C)
Moisture Retention	38% to 48%
Shipping Weight	43 - 45 lbs/ft ³ (689 - 721 g/L)
Color	White to Tan
Regenerability	Yes

PACKAGING OPTIONS

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

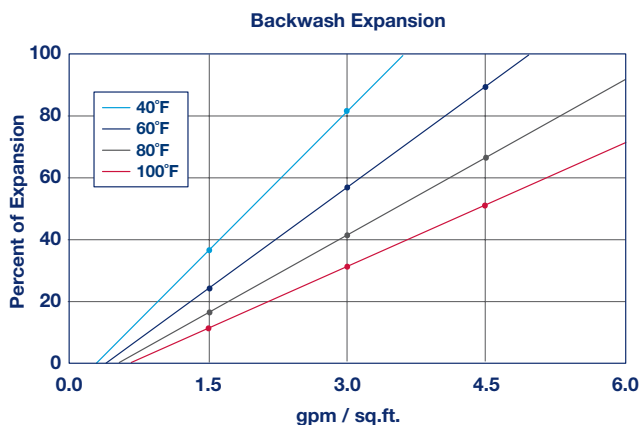
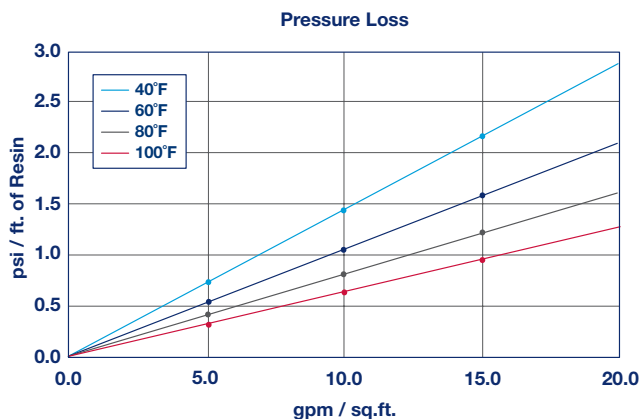


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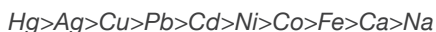
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PRECIOUS METALS REMOVAL

Removal of precious metals by ResinTech SIR-200 generally follows the solubility of that metal in the presence of sulfide ion. Metals load according to their relative sulfide affinities. However, high concentrations of “tramp” metals also load and may prevent loading of more desirable metals. The order of selectivity of Resintech SIR-200 is shown in the following sequence:



SIR-200 removes cationic forms of metals. Removal of

anionic and zero valent forms of metals is uncertain. Chelating agents such as EDTA interfere with SIR-200’s performance. As pH increases, capacity decreases. For most heavy metals, there is a critical pH above which the metal is no longer present as a free cation. In most cases, the best-suited pH will be less than 7.0. The thiol groups contained in SIR-200 become deactivated at pH greater than 10.

MERCURY REMOVAL

ResinTech SIR-200 has exceptional affinity for cationic forms of mercury and can be used to remove cationic mercury from wastewaters to much less than 1 ppb. Mercury can also be present as part of an organic complex, as an anion, and as an uncharged species. Removal of these species is uncertain. SIR-200 is rapidly degraded by the presence of chlorine and other oxidants and is inactivated at significantly alkaline pH. Due to the possible release of low levels of H₂S, SIR-200 is not recommended for use in potable water applications.

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	160°F
Hydrogen form	
Minimum bed depth	36 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	2 to 10 SU
Service flow rate	0.5 to 2 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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