SIR-400

Grade: Standard

Precious metal selective, chelating resin, styrene/DVB macroporous, freebase form

ResinTech SIR-400 is a free base form macroporous chelating weakly basic anion resin. Its unique functionality makes it selective for mercury and other heavy metals as well as for noble metals when present as cations. SIR-400 is intended for mercury removal and removal/recovery of various precious metals.

FEATURES & BENEFITS

- Precious Metals Recovery
- Largely Unaffected By Chloride Or Sulfate Concentration
- Effective At Low PH
- Enhanced Selectivity For Divalent Precious Metals

APPLICATIONS

- Precious Metal Recovery
- Cartridge Applications
- Mercury Removal
- Plating Rinse Water

PHYSICAL PROPERTIES

Polymer Matrix	Styrene/DVB
Polymer Type	Macroporous
Ionic Form (as shipped)	Free Base (FB)
Functional Group	Thiouronium
Physical Form	Spherical Beads
Uniformity Coefficient	1.60
Particle Size	16-50 US mesh (297-1190µm)
< 50 mesh (300 µm) %	< 1%
Minimum Sphericity (%)	95
Capacity (meq/mL)	1.60
Moisture Retention (%)	35 to 50
Shipping Weight	43 - 45 lbs/cu.ft. (689 - 721 g/L)
Color	White to Tan

SUGGESTED OPERATING CONDITIONS

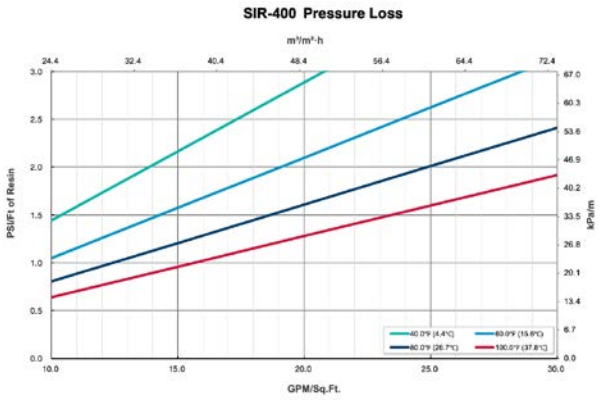
Maximum Temperature	212°F (100°C)
Minimum Bed Depth	36 in. (91.4 cm)
Maximum Pressure Loss	25 psi (172 kPa)
Operating pH Range	2.0 to 6.0
Flow Rate	
Working Service	1-2 gpm/cu.ft. (8-16 BV/h)

REACH COMPLIANCE

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

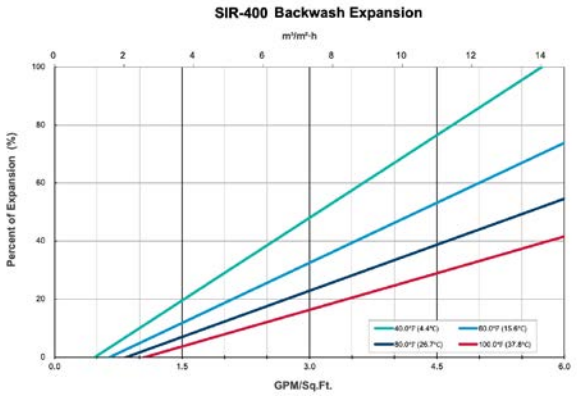
CORPORATE HEADQUARTERS 1801 Federal Street Camden, NJ 08105 USA PHONE 856.768.9600 EMAIL info@resintech.com WEB resintech.com

PRESSURE LOSS



The graph above shows the expected pressure loss of ResinTech SIR-400 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-400 as a function of flow rate at various temperatures.

PRECIOUS METALS REMOVAL

Removal of precious metals by ResinTech **SIR-400** generally follows the metals solubility in the presence of sulfide ion. Metals load according to their relative sulfide affinities. However, high concentrations of "tramp" metals may also load and may prevent loading of more desirable metals. The order of selectivity of Resin tech **SIR-400** shown in the following sequence:

Hg>Ag>Cu>Pb>Cd>Ni>Co>Fe>Ca>Na

SIR-400 does not remove anionic complexes of metallic cations. The presence of chelating agents such as EDTA interfere with the performance of **SIR-400**. 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 thiouronium groups contained in **SIR-400** become deactivated at pH greater than 10.

PACKAGING

Standard

1 cu.ft. Bag | 7 cu.ft. Drum

25L Bag | 200 L Drum

Metric

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

140L Drum | 1000 L Supersack

Shipping Weight

43 - 45 lbs/cu.ft. (689 - 721 g/L)

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MATERIAL SAFETY DATA SHEETS (MSDS)

Material Safety Data Sheets (MSDS) 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

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