

## SUPRA SIR-1000

CHELATING RESIN

**CHELATING  
POLYSTYRENIC MACROPOROUS  
ACID SULFATE FORM**

ResinTech SIR-1000 is a macroporous chelating weak base anion resin. It is functionalized with picolylamine which allows the resin to maintain its chelating strength even in significantly acidic solutions. SIR-1000 is intended for use in process baths and rinse waters in metal finishing applications. It is especially well suited for use in highly acidic trichrome plating baths.

### APPLICATIONS

- Copper Removal - Trichrome Baths
- Solution Mining

### TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS

<b>Polymer Matrix</b>	Styrenic Macroporous
<b>Ionic Form</b>	Acid sulfate
<b>Functional Group</b>	Picolylamine
<b>Physical Form</b>	Spherical Beads
<b>Particle Size</b>	16 to 50 US Mesh (297 - 1190µm)
<b>% &lt; 50 mesh (300µm)</b>	< 1%
<b>Minimum Sphericity</b>	95%
<b>Uniformity Coefficient</b>	1.6
<b>Reversible Swelling</b>	Acid Sulfate to SO <sub>4</sub> 15% to 20%
<b>Temp Limit</b>	250°F (121°C)
<b>Capacity (meq/mL)</b>	0.8
<b>Moisture Retention</b>	40% to 60%
<b>Shipping Weight</b>	38 - 40 lbs/ft <sup>3</sup> (609 - 641 g/L)
<b>Color</b>	Tan to Green
<b>Regenerability</b>	Yes

### PACKAGING OPTIONS

- 500 ml samples
- 1 ft<sup>3</sup> bags
- 1 ft<sup>3</sup> boxes
- 1 ft<sup>3</sup> drums
- 7 ft<sup>3</sup> drums
- 42 ft<sup>3</sup> supersacks

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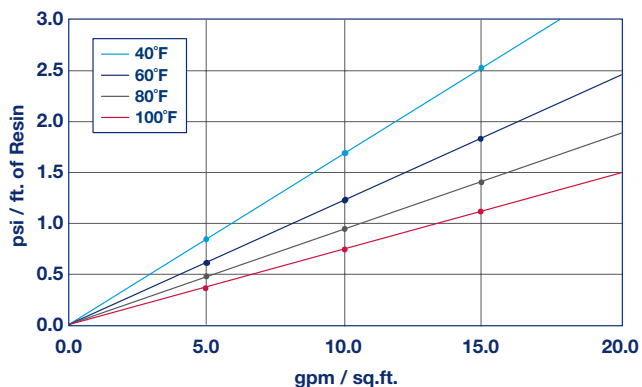


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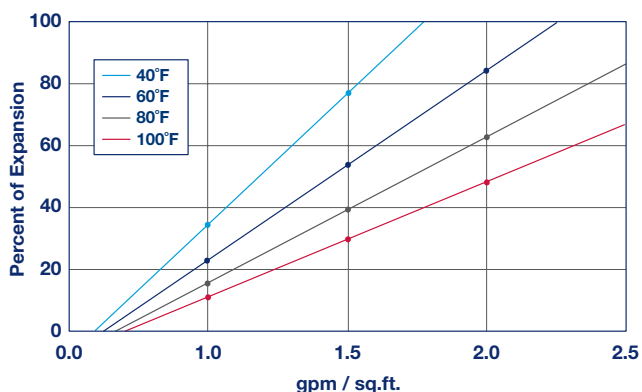
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**Pressure Loss**



**Backwash Expansion**



## TRICHROME BATHS

ResinTech SIR-1000 is used to revitalize spent plating and chemical process solutions while the baths are still in service. This avoids the loss of production time and reduces operating cost of neutralization and disposal. SIR-1000 is especially effective in treating chrome plating baths in this manner by removing copper, nickel and iron. For example, one or two cubic feet of SIR-1000 can be used in a partial recycle mode to maintain a four thousand gallon chrome plating bath indefinitely. When the resin is exhausted it is removed temporarily, regenerated, and then placed back on line.

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## SOLUTION MINING

Copper, nickel, cobalt, and other metals can be selectively extracted from liquors produced by heap leaching and other solution mining techniques using ResinTech SIR-1000. Loading depends on pH as well as metal concentrations, but in most cases the resin's operating capacity is more than half of the total capacity. Metals can be selectively eluted thus separating them for further purification. For instance, copper will load at pH well below 1 and can be eluted from the resin with ammonia. The complex nature of most mining liquors precludes making textbook predictions of operating capacity and extraction efficiency, therefore bench scale testing is recommended.

## SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	160°F
Free base form	
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	20 psi
Operating pH range	0 to 12 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

