

# PRODUCT SPECIFICATION SHEET

## MAGNA SBG1-UPS

STRONG BASE ANION

UNIFORM PARTICLE SIZE  
TYPE I ANION  
POLYSTYRENIC GEL  
CHLORIDE FORM

ResinTech SBG1-UPS is a uniform particle size type 1 gel strong base anion resin in chloride form. The uniform beads and somewhat smaller harmonic mean size yield minimal pressure loss and better regeneration efficiency compared to resins with Gaussian size distribution. SBG1-UPS is intended for use in industrial applications that require a high solids strong base anion resin and is recommended for countercurrently regenerated systems such as packed beds.

### APPLICATIONS

- Demineralization
- Packed Beds
- Trace Contaminants (U, Cr, As, Se, F, ClO<sub>4</sub>, ClO<sub>3</sub>)
- Nitrate Removal
- Sulfate Removal

### TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS

<b>Polymer Matrix</b>	Styrenic Gel
<b>Ionic Form</b>	Chloride
<b>Functional Group</b>	Trimethylamine
<b>Physical Form</b>	Spherical Beads
<b>Particle Size</b>	20 to 40 US Mesh (400 - 841 µm)
<b>% &lt; 50 mesh (300µm)</b>	< 0.5% minus 50
<b>Minimum Sphericity</b>	95%
<b>Uniformity Coefficient</b>	1.25
<b>Reversible Swelling</b>	Cl to OH 18% to 22%
<b>Temp Limit</b>	170°F (77°C)
<b>Capacity (meq/mL)</b>	1.4
<b>Moisture Retention</b>	42% to 51%
<b>Shipping Weight</b>	43 - 45 lbs/ft <sup>3</sup> (689 - 721 g/L)
<b>Color</b>	White to Yellow
<b>Regenerability</b>	Yes
<b>Uniform Particle Size</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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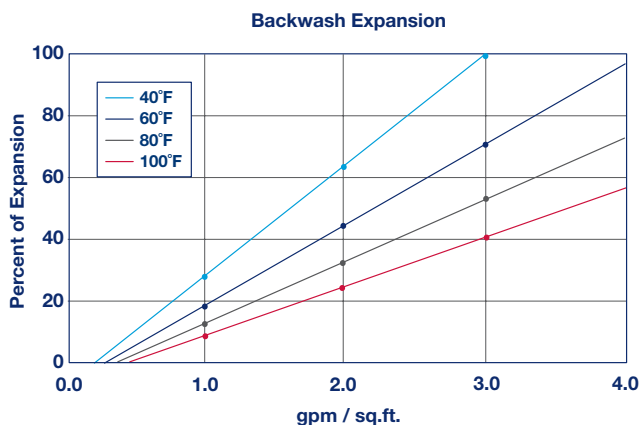
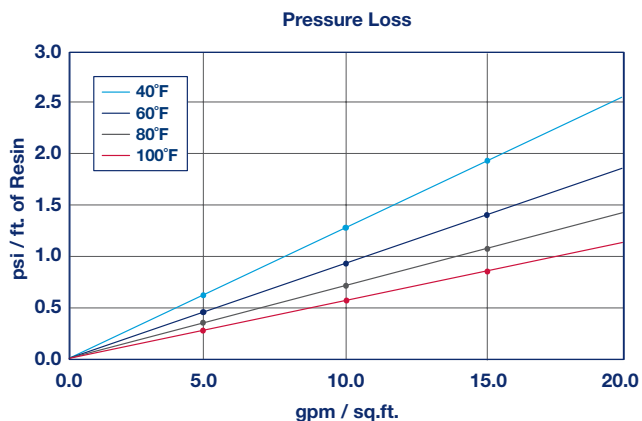
**RESINTECH INC.**  
INNOVATIONS IN ION EXCHANGE

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### PACKED BEDS

ResinTech SBG1-UPS has a very narrow particle size range. The uniformity allows a slightly smaller bead size to be used which results in faster exchange of ions, more efficient regeneration and lower leakage. SBG1-UPS is ideal for packed beds and other types of countercurrent ion exchangers where consistent operation is important cycle after cycle. Higher void space and minimal fine mesh beads provides low pressure loss and helps prevent channeling and other distribution problems. Packed beds typically have limited freeboard (only a few inches with the resin in the swollen form).

### TRACE CONTAMINANT REMOVAL (U, CR, AS, SE, CLO<sub>4</sub>)

ResinTech SBG1-UPS 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.

### SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
Hydroxide form	140°F
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	
Hydroxide cycle	2 to 6 percent NaOH
Salt cycle	2 to 10 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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