

# PRODUCT SPECIFICATION SHEET

## MAGNA SBG1

STRONG BASE ANION

TYPE I ANION  
POLYSTYRENIC GEL  
CHLORIDE FORM

ResinTech SBG1 is a type 1 high solids gel strong base anion resin in chloride form. It has high cross-linkage and higher ion exchange capacity than other strong base anion resins resulting in especially high selectivity for various anions. SBG1 is intended for the removal of contaminants such as nitrate, arsenate, chromate, uranium, etc.

### APPLICATIONS

- Demineralization
- 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>	16 to 50 US Mesh (297 - 1190 µm)
<b>% &lt; 50 mesh (300µm)</b>	< 1%
<b>Minimum Sphericity</b>	93%
<b>Uniformity Coefficient</b>	1.6
<b>Reversible Swelling</b>	Cl to OH 18% to 25%
<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

### CERTIFICATIONS

- Halal Certified
- Kosher Certified
- FDA Compliance\*

### 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

\* Paragraph 21CFR173.25 of the Food Additives Regulations of the US FDA

Revision 1.0  
ResinTech, Inc.®

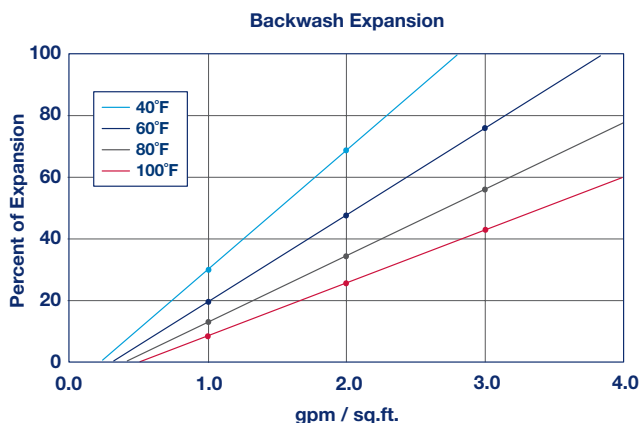
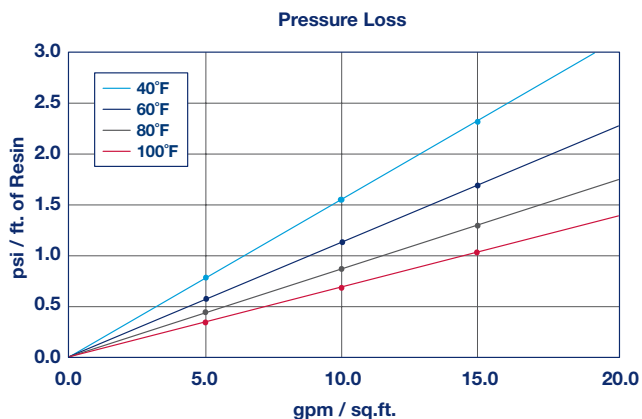


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### TRACE CONTAMINANT REMOVAL (U, CR, AS, SE, CLO<sub>4</sub>)

ResinTech SBG1 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.

### NITRATE REMOVAL

ResinTech SBG1 can be used in the chloride cycle to reduce nitrates along with sulfates. Regeneration is accomplished with sodium chloride brine, in a fashion similar to water softeners. Although high operating capacities and high salt efficiency can be obtained, there is also the possibility of nitrate dumping. Use of chloride form anion resin reduces pH during the early portion of the exhaustion cycle. When treating waters with high hardness the brine dilution and displacement waters should be softened and a low hardness salt used to prevent scaling during regeneration.

### 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	
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