

# SBG1-UPS

**Strong base type 1 anion resin, styrene/DVB gel, uniform particle size, 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

- Dealkalizer
- Demineralization / DI
- Trace Contaminant Removal



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Meets NSF/ANSI/CAN 61  
Meets NSF/ANSI/CAN 372  
REACH Registered

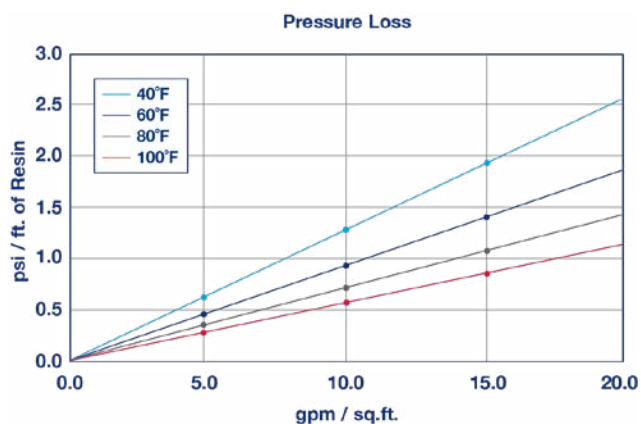
Kosher Certified  
Halal Certified

Conforms to §21CFR173.25 of the USFDA Food Additives Regulations

SBG1-UPS

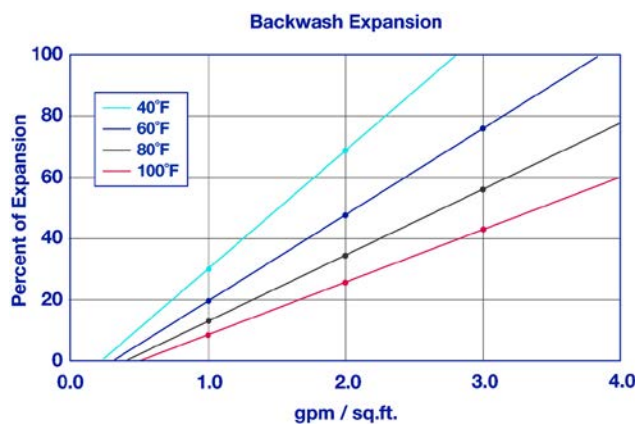
Polymer Matrix	Styrene/DVB	Minimum Sphericity (%)	95
Polymer Type	Gel	Reversible Swelling	18 to 25% (Cl → OH)
Ionic Form (as shipped)	Chloride (Cl <sup>-</sup> )	Uniformity	UPS
Functional Group	Trimethylamine	Uniformity Coefficient	1.25
Physical Form	Spherical Beads	Capacity (meq/mL)	1.40
Particle Size US Mesh (µm)	20 (841) to 40 (400)	Moisture Retention (%)	42 to 51
< 50 mesh (300 µm) %	< 0.5%	Shipping Weight	43 - 45 lbs/cu.ft. (689 - 721 g/L)
		Color	White To Amber

**PRESSURE LOSS**



The graph above shows the expected pressure loss of ResinTech SBG1-UPS 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 SBG1-UPS as a function of flow rate at various temperatures.

**SUGGESTED OPERATING CONDITIONS**

Maximum Temperature	170°F (77°C)	Flow Rate	
Maximum Pressure Loss	20 psi (138 kPa)	Working Service	1-10 gpm/cu.ft. (8-80 BV/h)
Backwash Expansion (%)	25 - 50		



**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).

**NITRATE REMOVAL**

ResinTech **SBG1-UPS** 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.

**TRACE CONTAMINANT REMOVAL (U, Cr, As, Se, ClO4)**

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 feed water. Useful capacities are obtained when the feed water 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.

**SULFATE REMOVAL**

High capacity resins such as ResinTech **SBG1-UPS** have high affinity for divalent anions such as sulfate, provided the feed water TDS is not greater than about 5,000 ppm. At higher TDS the resin loses its affinity for sulfate and begins to prefer chloride. Regeneration is accomplished with sodium chloride brine in a fashion similar to a water softener.

**REGENERATION DETAILS**

Salt Cycle (NaCl)	2% - 10%	Displacement Volume	10-15 gals/cu.ft. (1-2 BV)
Displacement Flow Rate	Same as dilution water		

**PACKAGING**

**Standard**

42 cu.ft. Supersack | 7 cu.ft. Drum  
 1 cu.ft. Bag | 5 cu.ft. Drum

**Metric**

25L Bag | 140L Drum



**SAFETY DATA SHEETS (SDS)**

Safety Data Sheets (SDS) 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](https://www.resintech.com)

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