SBG1-UPS

Grade: Standard

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

PHYSICAL PROPERTIES

Polymer Matrix	Styrene/DVB
Polymer Type	Gel
Ionic Form (as shipped)	Chloride (Cl^-)
Functional Group	Trimethylamine
Physical Form	Spherical Beads
Uniformity Coefficient	1.25
Effective Particle Size	625 +100 µm
< 50 mesh (300 µm) %	< 0.5%
Minimum Sphericity (%)	95
Reversible Swelling	18 to 25% (Cl → OH)
Capacity (meq/mL)	1.40
Moisture Retention (%)	42 to 51
Shipping Weight	43 - 45 lbs/cu.ft. (689 - 721 g/L)
Color	White To Amber

SUGGESTED OPERATING CONDITIONS

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

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

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INNOVATIONS IN ION EXCHANGE

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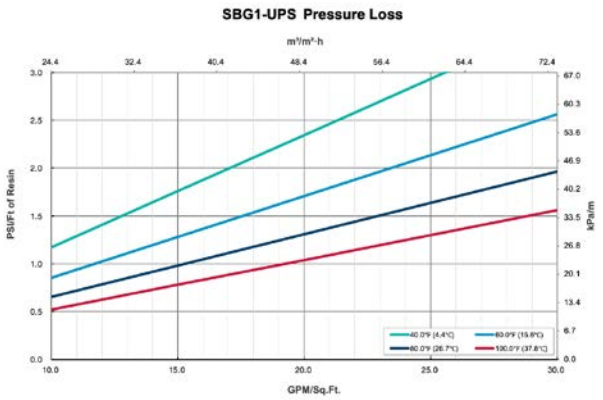
REGENERATION DETAILS

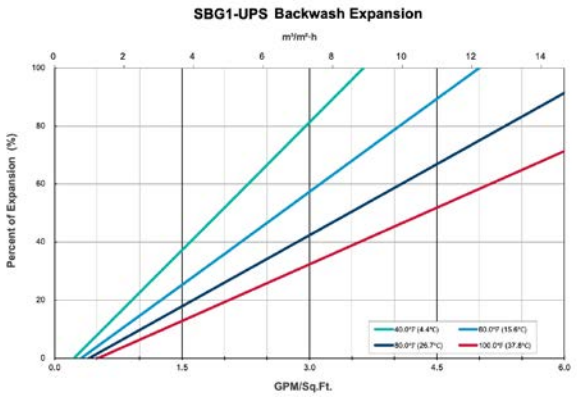
Salt Cycle (NaCl)	2% - 10%	Displacement Volume	10-15 gals/cu.ft. (1-2 BV)
Displacement Flow Rate	Same as dilution water	Rinse Volume	Minimum of 30 gals/cu.ft. (4 BV)

PRESSURE LOSS



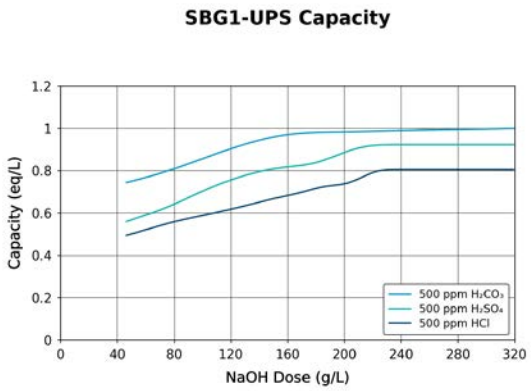
The graph above shows the expected pressure loss of ResinTech SBG1-UPS per foot of bed depth as a function of flow rate at various temperatures.

BACKWASH EXPANSION



The graph above shows the expansion characteristics of ResinTech SBG1-UPS as a function of flow rate at various temperatures.

CAPACITY



Capacity and leakage data are based on the following: 2:1 Ca:Mg ratio, 500 ppm TDS as CaCO3, 0.2% hardness in the salt and 10% brine concentration applied co-currently through the resin over 30 minutes. No engineering downgrade has been applied.

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).

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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 resinÕs 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.

CERTIFICATIONS

Meets NSF/ANSI/CAN 61

Meets NSF/ANSI/CAN 372

REACH Registered

PACKAGING

Standard

42 cu.ft. Supersack | 7 cu.ft. Drum
200L Drum | 1000L Supersack

Metric

1 cu.ft. Bag | 5 cu.ft. Drum
25L Bag | 140L Drum

Shipping Weight

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

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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