SBG1

Grade: Standard

Strong base type 1 anion resin, styrene/DVB gel, chloride form

ResinTech SBG1 is a type 1 high solids gel strong base anion resin in chloride form. It has high crosslinkage 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.

FEATURES & BENEFITS

- High total capacity for long run lengths
- Lower TOC leach rate
- Superior physical stability
- Controlled particle size
- Low pressure drop & better kinetics
- Complies with US FDA regulations

APPLICATIONS

- Dealkalizer
- Demineralization / DI
- Trace Contaminant Removal
- Boiler Feedwater
- Chloride Brines
- DBP
- General Properties
- High pH Solutions
- Plating Rinse Water
- Potable Water

PHYSICAL PROPERTIES

Polymer Matrix	Styrene/DVB
Polymer Type	Gel
Ionic Form (as shipped)	Chloride (Cl^-)
Functional Group	Trimethylamine
Physical Form	Spherical Beads
Uniformity Coefficient	1.60
Particle Size	16-50 US mesh (297-1190µm)
< 50 mesh (300 µm) %	< 1%
Minimum Sphericity (%)	93
Reversible Swelling	18 to 25% (Cl → OH)
Capacity (meq/mL)	1.40
Moisture Retention (%)	42 to 51
Shipping Weight	42 - 44 lbs/cu.ft. (673 - 705 g/L)
Color	White To Amber

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

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

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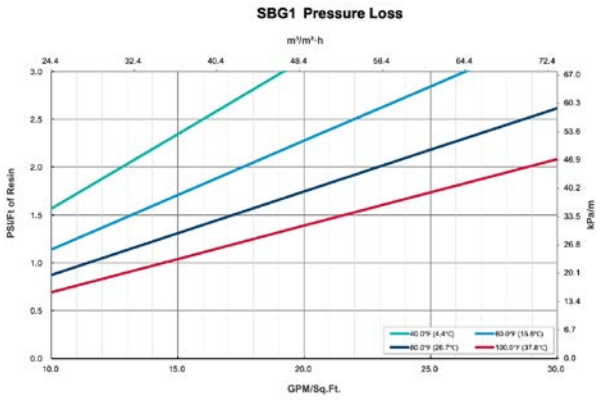
SUGGESTED OPERATING CONDITIONS

Maximum Temperature	170°F (77°C)
Minimum Bed Depth	24 in. (61.0 cm)
Maximum Pressure Loss	20 psi (138 kPa)
Backwash Expansion (%)	25 - 50
Operating pH Range	0 to 14
Flow Rate	
Working Service	1-10 gpm/cu.ft. (8-80 BV/h)

REGENERATION DETAILS

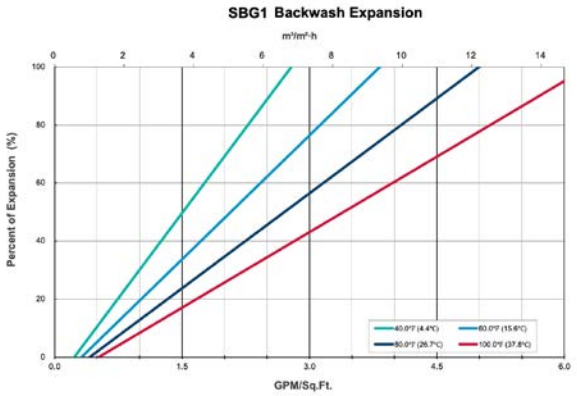
Hydroxide Cycle (NaOH)	2% - 6%
Salt Cycle (NaCl)	2% to 10%
Regenerant Level	4-10 lbs/cu.ft. (64.1-160.2 g/L)
Regenerant Flow Rate	0.25-1.0 gpm/cu.ft. (2-8 BV/h)
Regenerant Contact Time	> 40 minutes
Displacement Flow Rate	Same as dilution water
Displacement Volume	10-15 gals/cu.ft. (1-2 BV)
Rinse Flow Rate	Same as Service Flow
Rinse Volume	36-60 gals/cu.ft. (5-8 BV)

PRESSURE LOSS



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

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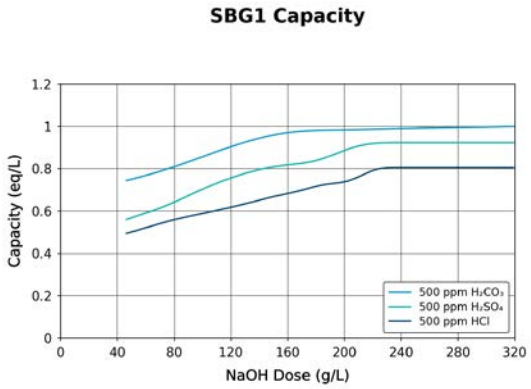
CAPACITY



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.

TRACE CONTAMINANT REMOVAL *(U, Cr, As, Se, ClO_4)*

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 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.

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.

DEMINERALIZATION

See ResinTech **SBG1-OH**.

CERTIFICATIONS

Meets NSF/ANSI/CAN 61

Meets NSF/ANSI/CAN 372

REACH Registered

Kosher Certified

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

42 - 44 lbs/cu.ft. (673 - 705 g/L)

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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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