

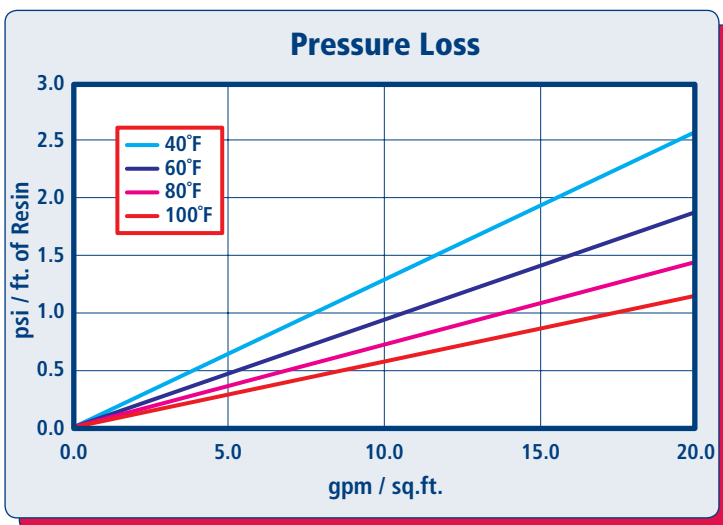
RESINTECH **SBG1P-UPS** is a narrowly graded chloride form type 1 porous gel strong base anion resin. *SBG1P-UPS* is a uniform particle size resin which results in increased void space and lower coefficient of drag than conventional gaussian distributed resins. RESINTECH *SBG1P-UPS* is intended for use where resin uniformity is an important attribute to help reduce pressure loss or prevent strainer plugging. *SBG1P-UPS* is supplied in the chloride form or can be special ordered in the hydroxide form (when ordered as *SBG1P-OH-UPS*).

FEATURES & BENEFITS

- HIGHLY UNIFORM PARTICLE SIZE**
 20 to 40 mesh size, provides low pressure drop and superior kinetics
- ORGANIC FOULING RESISTANCE**
 Porous structure allows greater elution of organic molecules during regeneration
- SUPERIOR PHYSICAL STABILITY**
 95% plus sphericity and high crush strengths together with carefully controlled particle distribution provides long life and low pressure drop
- COMPLIES WITH US FDA REGULATIONS**
 Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the US FDA

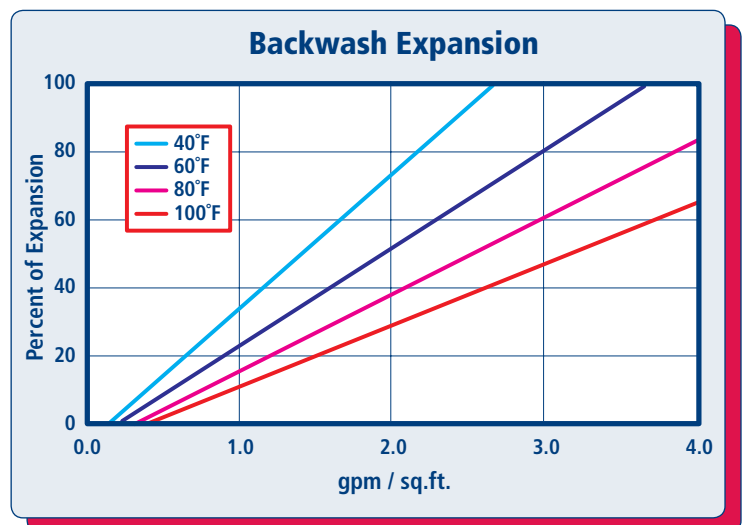
Prior to first use for potable water, resin should be backwashed for a minimum of 20 minutes, followed by 10 bed volumes of downflow rinse.

HYDRAULIC PROPERTIES



PRESSURE LOSS

The graph above shows the expected pressure loss of ResinTech SBG1P-UPS per foot of bed depth as a function of flow rate at various temperatures.



BACKWASH

The graph above shows the expansion characteristics of ResinTech SBG1P-UPS as a function of flow rate at various temperatures.

RESINTECH® SBG1P-UPS

PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer Type	Gel
Functional Group	Trimethylamine
Physical Form	Spherical beads
Ionic Form as shipped	Chloride or Hydroxide
Total Capacity	
Hydroxide form	>1.2 meq/mL
Chloride form	>1.4 meq/mL
Water Retention	
Chloride form	51 to 60 percent
Approximate Shipping Weight	
Hydroxide form	41 lbs./cu.ft.
Chloride form	43 lbs./cu.ft.
Swelling, Cl to OH	20 to 28 percent
Screen Size Distribution (U.S. mesh)	20 to 40
Maximum Fines Content (<50 mesh)	0.5 percent
Minimum Sphericity	95 percent
Uniformity Coefficient	1.25 approx.
Resin Color	White to amber

Note: Physical properties can be certified on a per lot basis, available upon request

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.

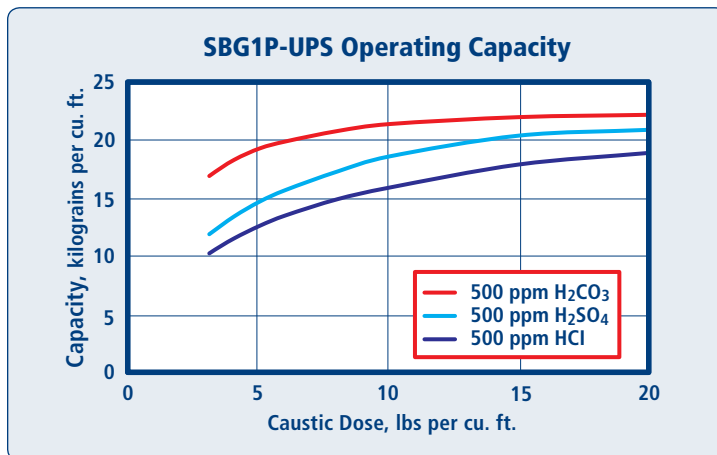
Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.

For operation outside these guidelines, contact ResinTech Technical Support

APPLICATIONS

DEMINERALIZATION

RESINTECH SBG1P-OH-UPS can be used as the anion component in a variety of demineralization applications where a hydroxide form anion resin is coupled with a hydrogen form cation resin. Common configurations include separate beds, mixed beds and other more complicated arrangements. Regeneration is accomplished with dilute sodium hydroxide, heated when low silica leakage is desired.



Capacity based on 500 ppm of stated acid (as CaCO₃). Capacity based on 36 inch deep bed depth, flow rate of 2 to 4 gpm per cu. ft. and greater than 40 minute caustic injection time. No engineering downgrade has been applied.

PACKED BEDS

RESINTECH SBG1P-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. SBG1P-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 provide low pressure loss and help prevent channeling and other distribution problems. Packed beds typically have limited freeboard (only a few inches with the resin in the swollen form).

LAYERED BEDS

RESINTECH SBG1P-UPS has a very narrow particle size range. The uniformity and absence of very small beads makes SBG1P-UPS ideal for layered beds where it is important that the two resin layers stay separate from each other. For layered bed applications SBG1P-UPS should be paired with WBMP-UPS. The strong base layer is usually about 70% of the total bed volume. Layered beds are normally countercurrently regenerated.



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CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS. Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

MATERIAL SAFETY DATA SHEETS (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information. That information 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.

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