

RESINTECH SBG2 is a chloride form type 2 gel strong base anion resin. *SBG2* has high capacity, high chemical efficiency and good resistance to fouling. *RESINTECH SBG2* is intended for use in the chloride form for removal of contaminants such as nitrate, arsenate, chromate, uranium, etc., as well as in the hydroxide form for all types of deionizing systems. *SBG2-OH* is especially well suited for use for systems where amine odors might be objectionable. *RESINTECH SBG2* is supplied in the chloride form or in the hydroxide form (when ordered as *SBG2-OH*).



C US
**NSF/ANSI-61 CERTIFIED FOR
MATERIAL SAFETY**

WQA Gold Seal Certified when ordered as SBG2-HP

FEATURES & BENEFITS

- HIGH OPERATING CAPACITY**

Type 2 anion provides high regeneration efficiency and high throughput per pound of caustic regenerant

- MULTIPLE CONTAMINANT REMOVAL**

Useful as a general purpose non-selective anion resin when operated in the chloride cycle for the removal of sulfates, nitrates, arsenic, uranium, chromate, and other drinking water contaminants

- SUPERIOR PHYSICAL STABILITY**

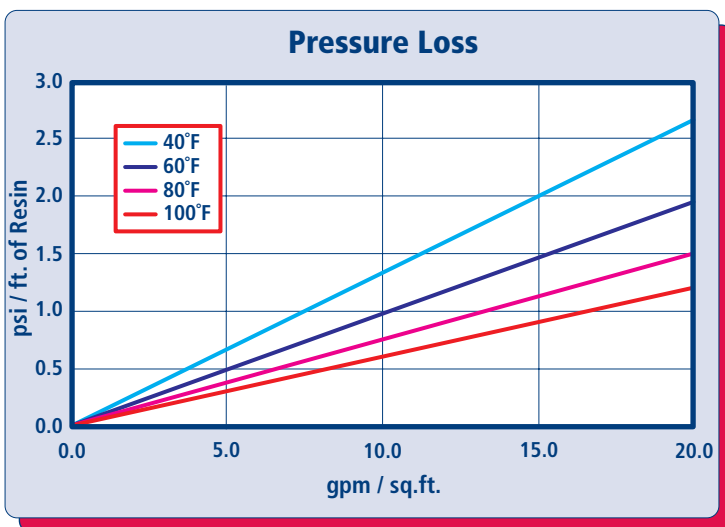
93% plus sphericity and high crush strengths together with carefully controlled particle distribution provides long life and low pressure drop

- COMPLIES WITH US FDA REGULATIONS**

Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the US FDA

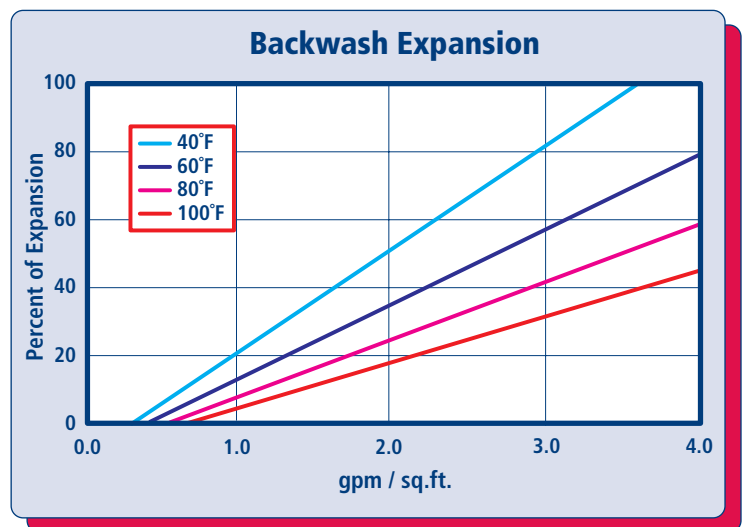
NSF/ANSI-61 compliance requires conditioning with a minimum 20 bed volume rinse prior to first use.

HYDRAULIC PROPERTIES



PRESSURE LOSS

The graph above shows the expected pressure loss of *ResinTech SBG2* per foot of bed depth as a function of flow rate at various temperatures.



BACKWASH

The graph above shows the expansion characteristics of *ResinTech SBG2* as a function of flow rate at various temperatures.

RESINTECH® SBG2

PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer Type	Gel
Functional Group	Dimethylethanolamine
Physical Form	Spherical beads
Ionic Form as shipped	Chloride or Hydroxide
Total Capacity	
Chloride form	>1.35 meq/mL
Water Retention	
Chloride form	36 to 49 percent
Approximate Shipping Weight	
Chloride form	44 lbs./cu.ft.
Swelling, Cl to OH	8 to 12 percent
Screen Size Distribution (U.S. mesh)	16 to 50
Maximum Fines Content (<50 mesh)	1 percent
Minimum Sphericity	93 percent
Uniformity Coefficient	1.6 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	95°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.

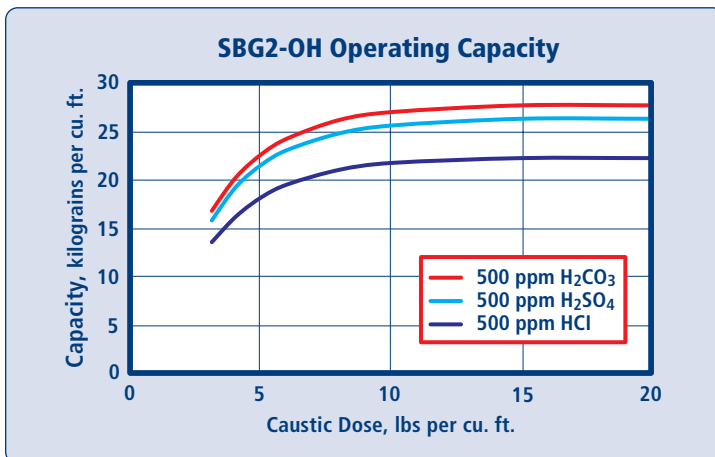
Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.

For operation outside these guidelines, contact ResinTech Technical Support

APPLICATIONS

DEMINEERALIZATION

RESINTECH SBG2-OH 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. SBG2-OH is more efficiently regenerated than type 1 resins such as SBG1-OH and often has higher operating capacity. SBG2-OH has less objectionable odor than typically associated with type 1 anion resins.



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.

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

RESINTECH SBG2 has high capacity in the chloride form 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 feed 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 SBG2 can be used in the chloride cycle to reduce nitrates along with sulfates. 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.

DEALKALIZER

RESINTECH SBG2 can be used in the chloride cycle to remove bicarbonate alkalinity. The exchange is somewhat unfavorable and results in modest capacity and substantial alkalinity leakage. When the dealkaler follows a water softener and when low hardness salt is used, a small amount of sodium hydroxide can be mixed in with the salt to obtain higher operating capacity and lower leakage.

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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