

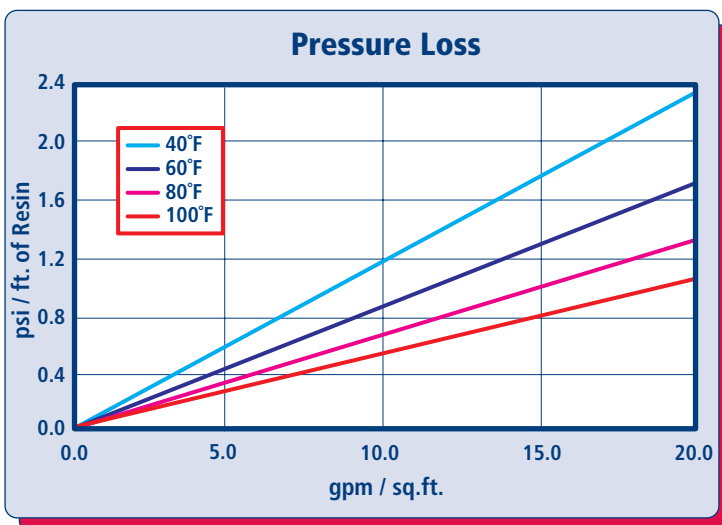
RESINTECH CG10-UPS is a sodium form 10% crosslinked gel strong acid cation resin. CG10-UPS is a uniform particle size resin with high void space and low coefficient of drag. RESINTECH CG10-UPS is intended for use where resin uniformity is an important attribute to help reduce pressure loss or prevent strainer plugging. CG10-UPS is available in the sodium or hydrogen form (when ordered as CG10-H-UPS).

FEATURES & BENEFITS

- HIGHLY UNIFORM PARTICLE SIZE**
 20 to 40 mesh size, provides low pressure drop and superior kinetics
- 10% DIVINYLBENZENE**
 Gives greatly increased life where resin degradation due to oxidative effects are anticipated
- 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

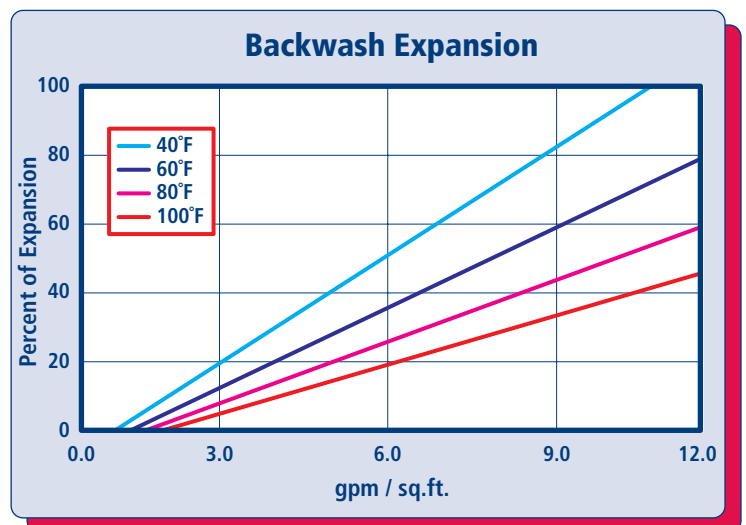
Prior to first use for potable water, resin should be backwashed for a minimum of 20 minutes, followed by 10 bed volumes of downflow rinse.

HYDRAULIC PROPERTIES



PRESSURE LOSS

The graph above shows the expected pressure loss of ResinTech CG10-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 CG10-UPS as a function of flow rate at various temperatures.

PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer Type	Gel
Functional Group	Sulfonic Acid
Physical Form	Spherical beads
Ionic Form as shipped	Sodium or Hydrogen
Total Capacity	
Hydrogen form	>2.0 meq/mL
Sodium form	>2.2 meq/mL
Water Retention	
Hydrogen form	46 to 52 percent
Sodium form	39 to 45 percent
Approximate Shipping Weight	
Hydrogen form	51 lbs./cu.ft.
Sodium form	53 lbs./cu.ft.
Swelling, Na to H	4 to 8 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	Amber

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

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
Hydrogen form	265°F
Sodium form	280°F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	0 to 14 SU
Regenerant Concentration	
Hydrogen cycle	5 to 10 percent HCl
Hydrogen cycle	1 to 8 percent H ₂ SO ₄
Salt cycle	10 to 15 percent NaCl
Regenerant level	4 to 15 lbs./cu.ft.
Regenerant flow rate	0.5 to 1.5 gpm/cu.ft.
Regenerant contact time	>20 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

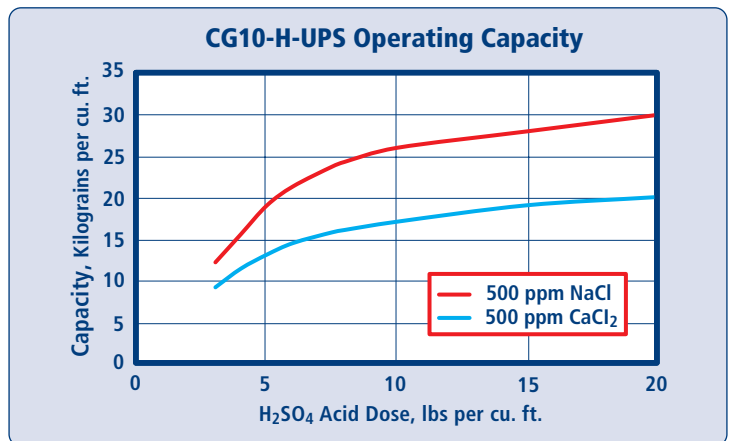
APPLICATIONS

SOFTENING

RESINTECH CG10-UPS is a 10% crosslinked cation resin optimized for use in condensate softeners, high flow rate applications, and other applications where high physical and chemical durability are more important than high chemical efficiency. CG10-UPS is proven to have a long useful life, even in heavily chlorinated waters where other cation resins do not last.

DEMINERALIZATION

ResinTech CG10-UPS can be used as the cation component in a variety of demineralization configurations where a hydrogen form cation resin is coupled with a hydroxide form anion resin. The high density of CG10-UPS provides ideal separation in polishing mixed beds. CG10-UPS has higher total capacity and lower chemical efficiency compared to CG8-UPS.



Capacity based on 500 ppm of stated salt (as CaCO₃) with 0% alkalinity, 36 in. bed depth, flow rate of 2 to 4 gpm per cu. ft. and >30 min. chemical injection time. Sulfuric acid concentration must be stepwise when calcium concentration exceeds 20% of total cations. No engineering downgrade has been applied.

PACKED BEDS

RESINTECH CG10-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. CG10-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).