CG10

CATION EXCHANGE RESIN
STRONG ACID GEL
10 % DVB, Na OR H FORM

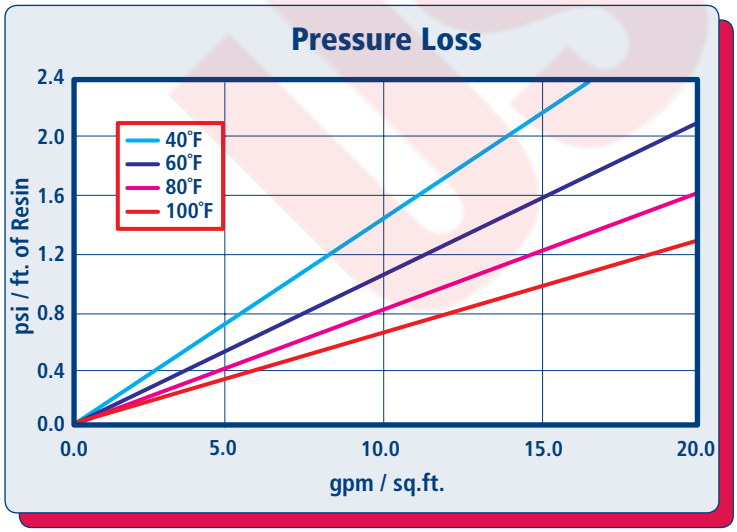
ResinTech CG10 is a sodium form 10% crosslinked gel strong acid cation resin. *CG10* has high resistance to both thermal and chemical oxidation. *ResinTech CG10* is intended for use in all industrial applications where physical and chemical durability are more important than chemical efficiency. *CG10* is available in the sodium or hydrogen form (when ordered as *CG10-H*).

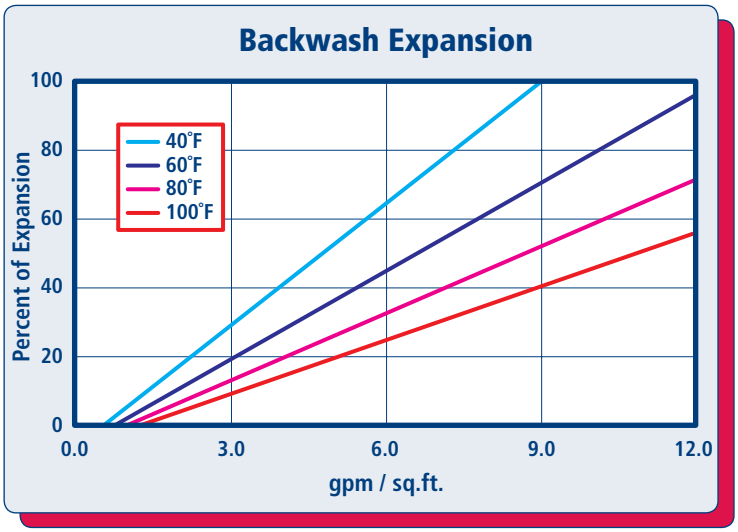
FEATURES & BENEFITS

- **10% DIVINYLBENZENE**
  Gives greatly increased life where resin degradation due to oxidative effects are anticipated
- **LOW COLOR THROW**
- **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

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* 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* as a function of flow rate at various temperatures.

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RESINTECH® CG10

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	52 lbs./cu.ft.
Sodium form	54 lbs./cu.ft.
Swelling, Na to H	4 to 8 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	Amber

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

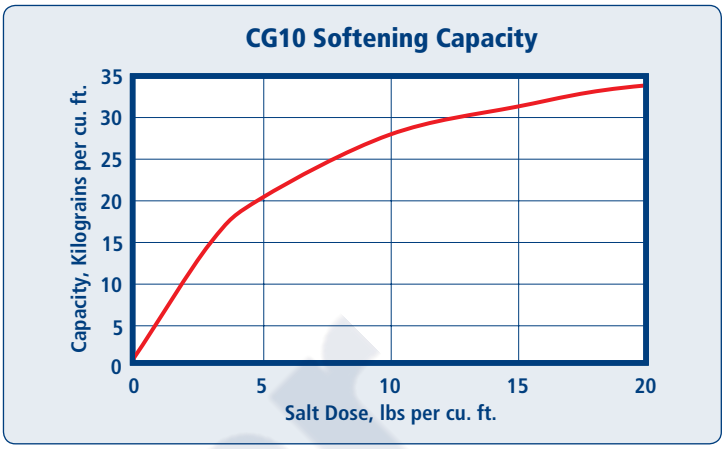
SUGGESTED OPERATING CONDITIONS

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_2SO_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

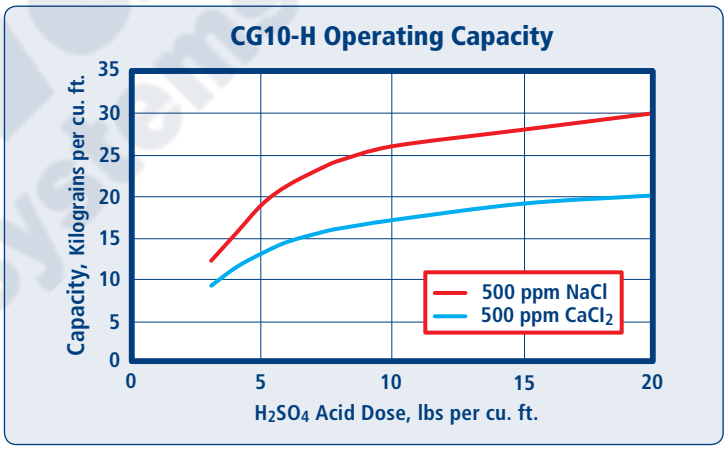
SOFTENING



Capacity and leakage data are based on the following: 2:1 Ca:Mg ratio, 500 ppm TDS as $CaCO_3$, 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.

DEMINERALIZATION

ResinTech CG10-H 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-H provides ideal separation in polishing mixed beds. CG10-H has higher total capacity and lower chemical efficiency compared to CG8-H.



Capacity based on 500 ppm of stated salt (as $CaCO_3$) 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.

HIGH TEMPERATURE USE

ResinTech CG10 is suitable for operation at temperatures as high as 280˚F. At temperatures above 212˚F, dissolved oxygen in the feedwater is a powerful oxidant and can chemically damage the resin. Oxygen levels in the feed should be reduced to less than 0.05 ppm to ensure a reasonable service life of the resin.

RESINTECH INC. INNOVATIONS IN ION EXCHANGE

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