RESINTECH INC
INNOVATIONS IN ION EXCHANGE

CG8

CATION EXCHANGE RESIN
STRONG ACID GEL
8% DVB, Na OR H FORM

RESINTECH CG8 is a sodium form 8% crosslinked gel strong acid cation resin. *CG8* is a workhorse cation resin optimized for industrial and residential applications that require good regeneration efficiency and oxidative stability. *RESINTECH CG8* is intended for use in all industrial and commercial softening applications, as well as residential applications that have moderate amounts of chlorine in the feedwater. *CG8-H* is intended for use in demineralizers and in mixed beds. *CG8* is available in the sodium or hydrogen form (when ordered as *CG8-H*).

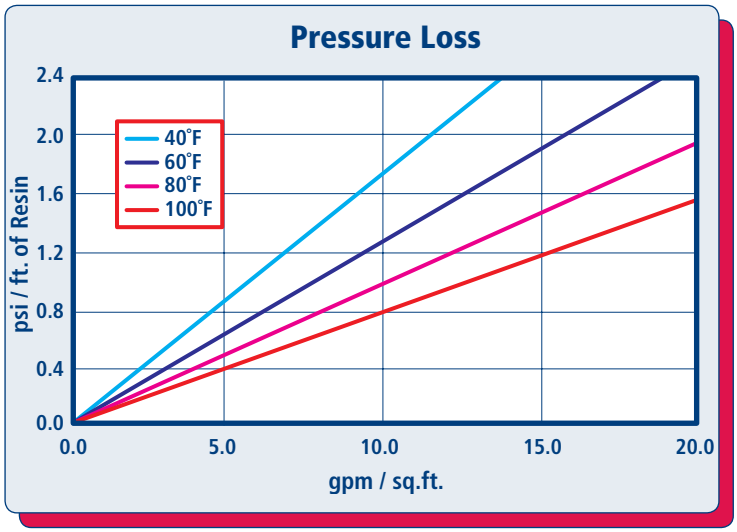
NSF/ANSI-61 CERTIFIED FOR MATERIAL SAFETY
WQA Gold Seal Certified when ordered as CG8-HP

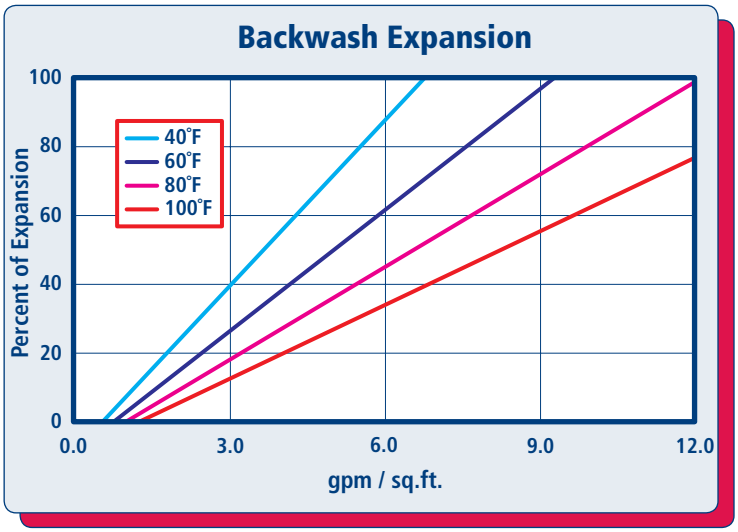
FEATURES & BENEFITS

- **INDUSTRIAL SOFTENING AND DEMINERALIZING APPLICATIONS**
  8% DVB crosslinking is ideal for most industrial applications
- **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 CG8* per foot of bed depth as a function of flow rate at various temperatures.

BACKWASH

The graph above shows the expansion characteristics of *ResinTech CG8* as a function of flow rate at various temperatures.

160 Cooper Road • West Berlin, NJ 08091 USA • p: 856.768.9600 • f: 856.768.9601 • e: ixresin@resintech.com • w: resintech.com

RESINTECH® CG8

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	>1.8 meq/mL
Sodium form	>2.0 meq/mL
Water Retention	
Hydrogen form	47 to 56 percent
Sodium form	42 to 49 percent
Approximate Shipping Weight	
Hydrogen form	50 lbs./cu.ft.
Sodium form	52 lbs./cu.ft.
Swelling, Na to H	5 to 9 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

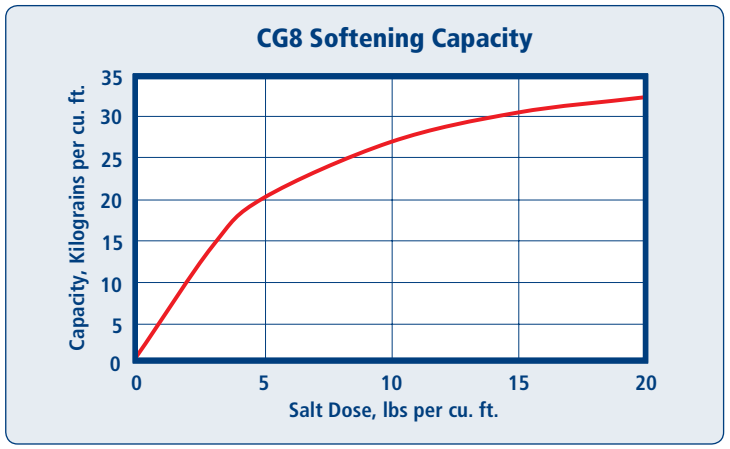
SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
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

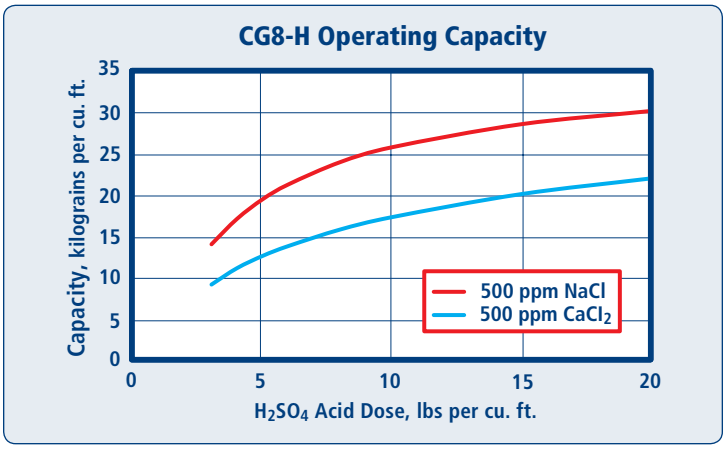
SOFTENING



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 CG8-H can be used as the cation component in separate bed and mixed bed demineralization applications where a hydrogen form cation resin is coupled with a hydroxide form anion resin. Regeneration is accomplished with stepwise sulfuric acid or with hydrochloric acid.



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.

IRON REMOVAL

CG8 has good capacity for ferrous iron. Iron content in the feedwater should not be more than 1 mg/L Fe per each 17 mg/L of hardness.

AMMONIA REMOVAL

RESINTECH CG8 is slightly selective for ammonia compared to sodium but hardness is much more preferred. Ammonia is not ionized at pH above 9 and is not well removed when the pH is significantly alkaline.

RESINTECH INC. INNOVATIONS IN ION EXCHANGE

East Coast - West Berlin, NJ p:856.768.9600 • Midwest - Chicago, IL p:708.777.1167 • West Coast - Los Angeles, CA p:323.262.1600