RESINTECH INC
INNOVATIONS IN ION EXCHANGE

SACMP

CATION EXCHANGE RESIN
STRONG ACID MACROPOROUS
Na OR H FORM

RESINTECH SACMP is a sodium form macroporous highly crosslinked strong acid cation resin. *RESINTECH SACMP* is intended for high flow rate and high temperature polishing applications, as well as other applications that require the highest possible physical strength and chemical durability. *SACMP* is available in the sodium or hydrogen form (when ordered as *SACMP-H*).

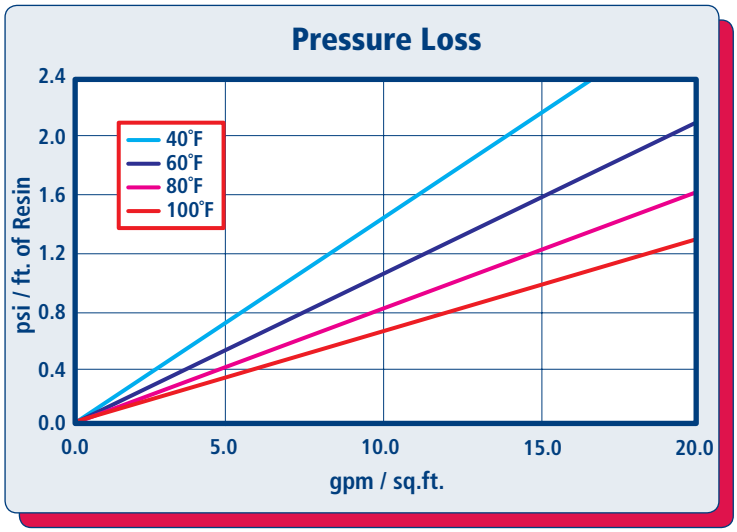
NSF/ANSI-61 CERTIFIED FOR MATERIAL SAFETY
WQA Gold Seal Certified when ordered as SACMP-HP

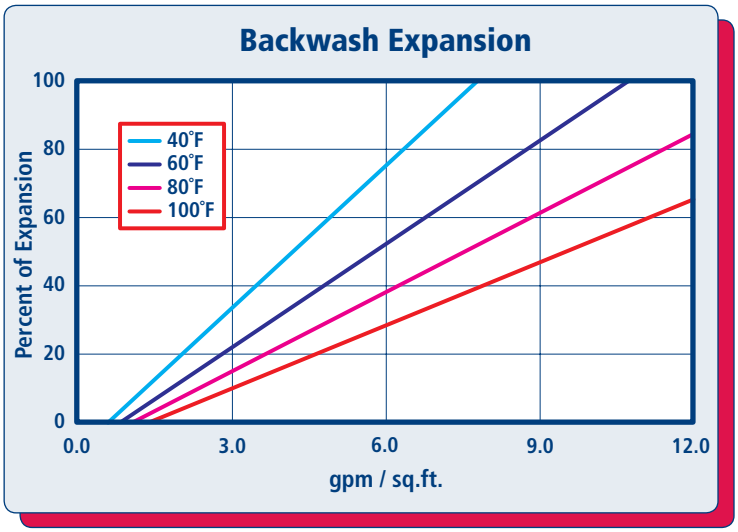
FEATURES & BENEFITS

- **MACROPOROUS STRUCTURE**
  Gives greatly increased life in stressful applications where resin degradation due to thermal and oxidative effects is anticipated
- **CONTROLLED PARTICLE SIZE**
  16 to 50 mesh size provides a low pressure drop and superior kinetics
- **SUPERIOR PHYSICAL STABILITY**
  98% 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 SACMP* per foot of bed depth as a function of flow rate at various temperatures.

BACKWASH

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

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RESINTECH® SACMP

PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer Type	Macroporous
Functional Group	Sulfonic Acid
Physical Form	Spherical beads
Ionic Form as shipped	Sodium or Hydrogen
Total Capacity	
Hydrogen form	>1.6 meq/mL
Sodium form	>1.65 meq/mL
Water Retention	
Hydrogen form	50 to 60 percent
Sodium form	45 to 55 percent
Approximate Shipping Weight	
Hydrogen form	48 lbs./cu.ft.
Sodium form	50 lbs./cu.ft.
Swelling, Na to H	3 to 5 percent
Screen Size Distribution (U.S. mesh)	16 to 50
Maximum Fines Content (<50 mesh)	1 percent
Minimum Sphericity	95 percent
Uniformity Coefficient	1.6 approx.
Resin Color	Tan

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

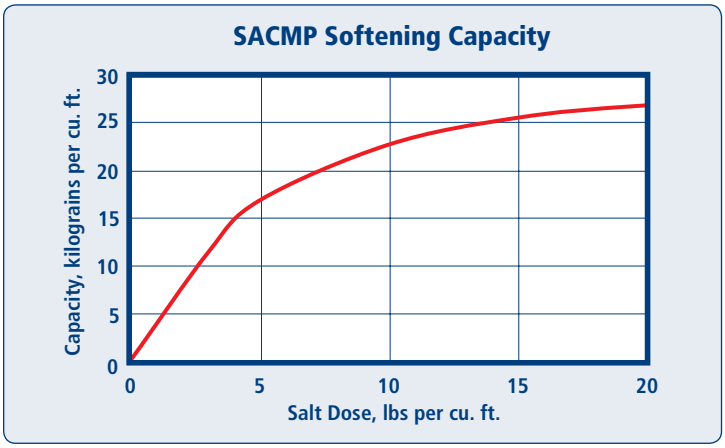
SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
Hydrogen form	280˚F
Sodium form	300˚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

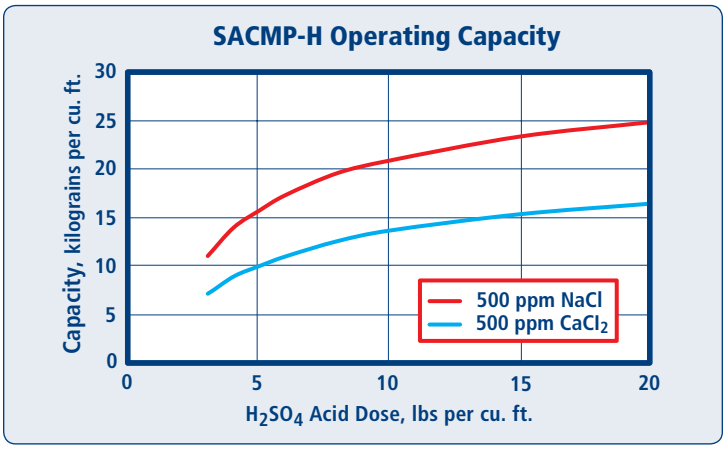
SOFTENING



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 SACMP-H can be used as the cation component in demineralization configurations where a hydrogen form cation resin is coupled with a hydroxide form anion resin. SACMP-H is ideal for high flow rate polishers and where high resistance to mechanical, thermal, and oxidative stresses is required.



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.

RADWASTE

RESINTECH SACMP is ideally suited for radwaste applications. The high crosslinking content of SACMP gives it improved resistance to chemical damage caused by ionizing radiation. Structural integrity is maintained up to approximately 1 x 10^9 rads exposure.

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