



# EPOCHEMMIE CO., LTD

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## DATA SHEET

**Commodity:** Gel Strong Acid Cation Exchange Resin

**Type:** C002

**Application:** C002 is a light colored, gel type sulfonated polystyrene cation resin supplied in the sodium form as moist, tough uniform spherical beads.

C002 is well suited for industrial, commercial or residential softening applications where free chlorine is not present because of its high capacity and good physical stability

**Product Description:**

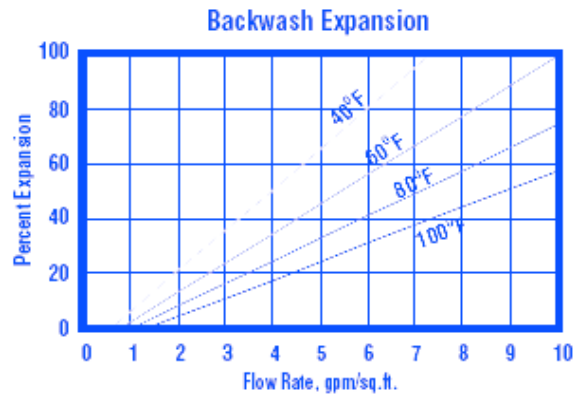
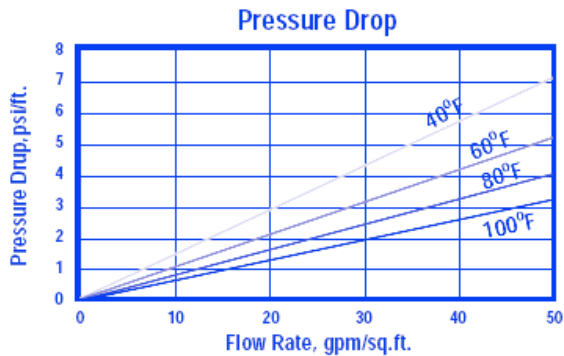
Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Polystyrene crosslinked with 7% DVB
Functional Group	R-(SO <sub>3</sub> )-M <sup>+</sup>
Ionic Form, as shipped	Sodium (Na <sup>+</sup> )
Physical Form And Appearance	Clear Spherical Beads
Sphericity	95% min.
Screen Size Range --- U.S. Standard Screen	16-50 mesh, wet
Particle Size Range	+1.2 mm < 5%, -0.3 mm < 1%
Uniformity Coefficient	1.6 max.
Water Retention, Na <sup>+</sup> form	45-50%
Swelling Na <sup>+</sup> → H <sup>+</sup> Ca <sup>2+</sup> → Na <sup>+</sup>	10% max. 5% max.
Shipping Weight, Na <sup>+</sup> form	770-870 g/l (50 lbs/cu.ft, approx.)
Total Exchange Capacity, Na <sup>+</sup> form	1.9 eq/l min.
pH Range	0-14

### Suggested Operating Conditions

Maximum Temperature		
	Na <sup>+</sup> form	120°C (248°F) max.
	H <sup>+</sup> form	100°C (212°F) max.
Minimum Bed Depth		0.6 m (24 inches)
Backwash Rate		50-75% bed expansion
Regeneration		
	Regenerant Concentration	8-20% NaCl or saturated salt water
	Flow Rate	2 to 7 BV/h (0.25 to 0.90 gpm/cu.ft)
	Contact Time	At least 30 Minutes
Displacement Rinse Rate		Same as Regenerant Flow Rate
Displacement Rinse Volume		10-15 gallons/cu.ft
Fast Rinse Rate		Same as Service Flow Rate
Fast Rinse Volume		35-60 gallons/cu.ft
Service Flow Rate		4-8 BV/h (1.0-5.0 gpm/cu.ft)

### Hydraulic Properties



**Pressure Drop:** The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various Temperatures.

**Backwash:** After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. That will remove any foreign matter and reclassify the bed. The Graph above shows the expansion characteristics of C002 in the sodium form.