



# PC002

Gel Strong Acid Cation Exchange Resin

## PURE RESIN

### Product Description

**Pure PC002** is a light colored, gel type sulfonated polystyrene cation resin supplied in the sodium form as moist, tough uniform spherical beads.

**Pure PC002** 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.

**Pure PC002** is certified by WQA to NSF/ANSI 44&61 for materials safety, is well used for residential softening and drinking water systems.



### Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Polystyrene crosslinked with 7% DVB
Functional Group	R-(SO <sub>3</sub> ) <sup>-</sup> 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	0.315-1.25mm
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

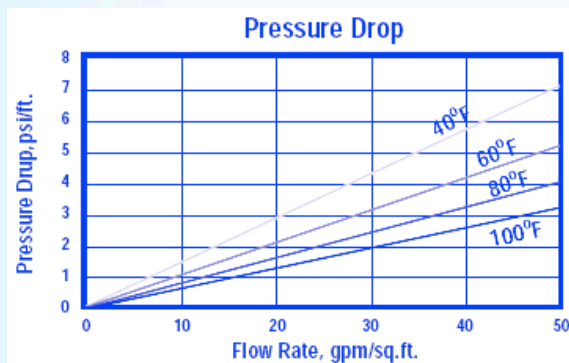
### Fast Rinse Volume

35-60 gallons/cu.ft

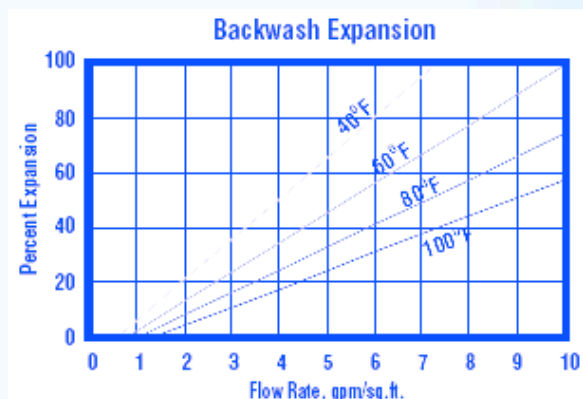
### Service Flow Rate

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 Pure PC002 in the sodium form.