

PURE RESIN PC002

Food grade, gel strong acid cation exchange resin

PRODUCT DESCRIPTION

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

APPLICATIONS - SOFTENING

Pure PC002 is well suited to the treatment of food, beverages, drinking water and water used in food processing. Pure PC002 is certified by WQA to NSF/ANSI 44&61 for use in the treatment of food for human consumption. Its spherical shape, excellent chemical and physical stability and very low extractable content play an important role in its successful use in these areas. It is well suited for industrial and drinking water softening applications due to its high capacity and good physical stability.

Typical Physical & Chemical Characteristics

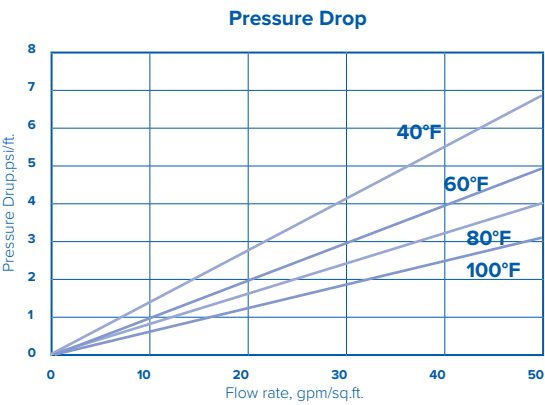
Polymer Matrix Structure		Polystyrene crosslinked with DVB
Functional Group		R-(SO ₃)-M ⁺
Ionic Form, as shipped		Na ⁺ / H ⁺
Physical Form And Appearance		Clear Spherical Beads
Sphericity		95% min.
US Standard screen size range		16-50 mesh, wet
Particle Size Range		+1.2 mm < 5%, -0.3 mm < 1%
Uniformity Coefficient		1.6 max.
Water Retention	Na ⁺ H ⁺	45-51% 52-57%
Swelling	Na ⁺ → H ⁺ Ca ²⁺ → Na ⁺	10% max. 8% max.
Shipping Weight	Na ⁺ H ⁺	770-845 g/l (50 lbs/cu.ft, approx.) 760-835 g/l (49 lbs/cu.ft, approx.)
Total Exchange Capacity	Na ⁺ H ⁺	1.9 eq/l min. 1.8 eq/l min.
pH Range		0-14



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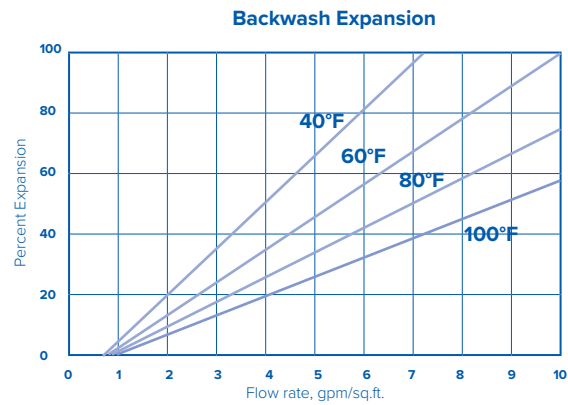
Suggested Operating Conditions		
Maximum Temperature	Na+ H+	120°C (248°F) max. 100°C (212°F) max.
Minimum Bed Depth		0.6 m (24 inches)
Backwash Rate		50-75% bed expansion
Regeneration		
Regenerant Concentration		8-20% NaCl or saturated salt water
Flow Rate		2 to 7 BV/h (0.25 to 0.90 gpm/cu.ft)
Contact Time		At least 30 Minutes
Displacement Rinse Rate		Same as Regenerant Flow Rate
Displacement Rinse Volume		10-15 gallons/cu.ft
Fast Rinse Rate		8-40 BV/h (1.0-5.0 gpm/cu.ft)
Fast Rinse Volume		3-10 BV (24-45 gal/ft3)
Service Flow Rate		8-40 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. This will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of Pure PC002 in the sodium form.

