



PC002

Food Grade
Gel Strong Acid Cation Exchange Resin

PURE 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 for the treatment of foodstuffs, beverages, potable waters, and water used in the processing of food. **Pure PC002** is certified by WQA according to NSF/ANSI 44&61 for use in the treatment of foods for human consumption. Its high bead integrity, excellent chemical and physical stability, and very low extractibles content play a large part in its successful employment in these areas.

NSF/ANSI 44&61 certified.



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.
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 ⁺ form H ⁺ form	45-51% 52-57%
Swelling Na ⁺ → H ⁺ Ca ²⁺ → Na ⁺	10% max. 8% max.
Shipping Weight, Na ⁺ form H ⁺ form	770-845 g/l (50 lbs/cu.ft, approx.) 760-835 g/l (49 lbs/cu.ft, approx.)
Total Exchange Capacity, Na ⁺ form H ⁺ form	1.9 eq/l min. 1.8 eq/l min.
pH Range	0-14

Marketing Dept.

Tel: +86-571-87211518 / 87229835

Fax: +86-571-87211508

E-mail: info@pureresin.com

Factory

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Fax: +86-575-82739248

www.pureresin.com



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Suggested Operating Conditions

Maximum Temperature

Na ⁺ form	120°C (248°F) max.
H ⁺ form	100°C (212°F) max.

Minimum Bed Depth	0.6 m (24 inches)
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Backwash Rate	50-75% bed expansion
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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
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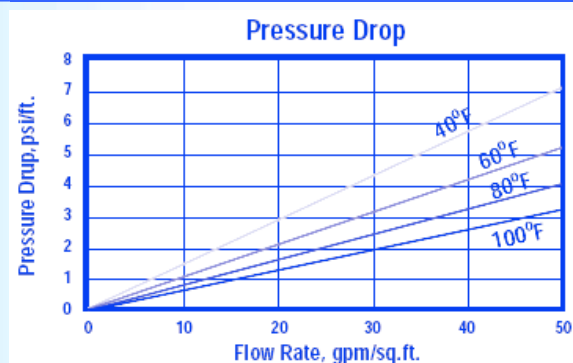
Displacement Rinse Volume	10-15 gallons/cu.ft
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Fast Rinse Rate	8-40 BV/h (1.0-5.0 gpm/cu.ft)
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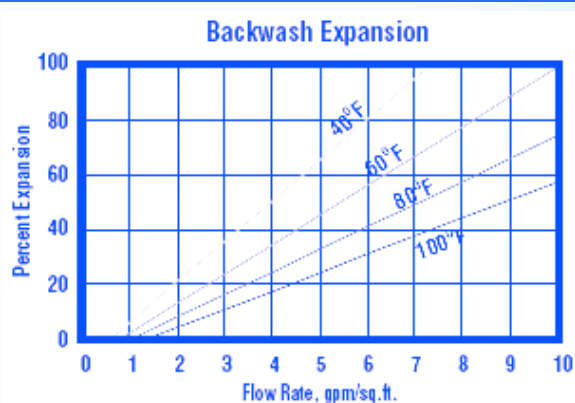
Fast Rinse Volume	3-10 BV (24-45 gal/ft ³)
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Service Flow Rate	8-40 BV/h (1.0-5.0 gpm/cu.ft)
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Hydraulic Properties



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.

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