



PC002ID

Industry Grade
Gel Strong Acid Cation Exchange Resin

PURE RESIN

Product Description

Pure PC002ID is a brown colored, gel type polystyrene sulfonate cation resin supplied in the sodium form as moist, tough spherical beads.

Applications -- softening

Pure PC002ID is well suited for industrial softening applications. Its high bead integrity, excellent chemical and physical stability, play a large part in its successful employment in these areas.

Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Polystyrene crosslinked with 7% DVB
Functional Group	R-(SO ₃) ⁻ M ⁺
Ionic Form, as shipped	Sodium (Na ⁺)
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	48-58%
Swelling Na ⁺ → H ⁺ Ca ²⁺ → Na ⁺	10% max. 5% max.
Shipping Weight, Na ⁺ form	770-870 g/l (50 lbs/cu.ft, approx.)
Total Exchange Capacity, Na ⁺ form	1.80 eq/l min.
pH Range	0-14

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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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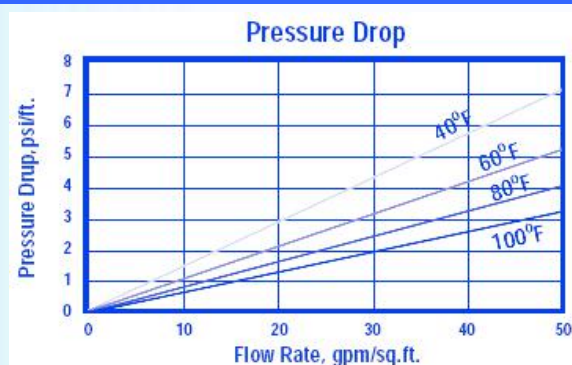
Displacement Rinse Volume	10-15 gallons/cu.ft
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Fast Rinse Rate	Same as Service Flow Rate
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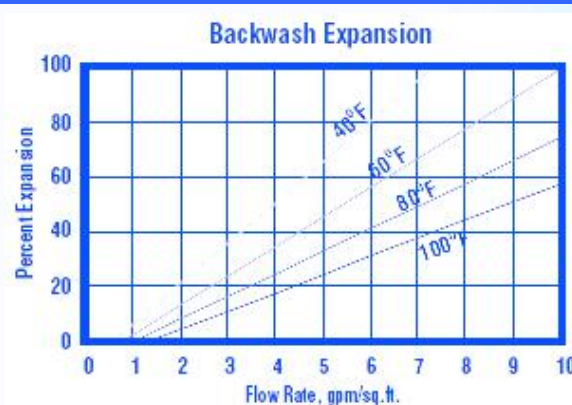
Fast Rinse Volume	35-60 gallons/cu.ft
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Service Flow Rate	4-8 BV/h (1.0-5.0 gpm/cu.ft)
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Hydraulic Properties



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. That will remove any foreign matter and reclassify the bed. The Graph above shows the expansion characteristics of Pure PC002ID in the sodium form.

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