



# PC200

Cation Exchange Resin  
Macroporous Weak Acid

High Quality & Cost-Effective

## Product Description

**Pure PC200** is a macroporous poly-acrylic weak acid cation resin. It can be supplied in the hydrogen (H) form or sodium (Na) as spherical beads.

## Applications

1. **Pure PC200** in H cycle is used for dealkalization, deionization and chemical processing applications.
2. **Pure PC200** supplied in sodium cycle for use in applications such as softening and removal of heavy metal cations. This requires a two stage regeneration process using a strong acid first and then a neutralization rinse to put the resin into the sodium form and is especially effective in high solids softening applications.

## Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Acrylic-Divinylbenzene
Functional Group	R-(COOH) <sup>-</sup>
Ionic Form, as shipped	H <sup>+</sup>
Physical Form And Appearance	White, Opaque 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, H <sup>+</sup> form	45-52%
Swelling H <sup>+</sup> → Ca <sup>+</sup> H <sup>+</sup> → Na <sup>+</sup>	7% max. 65% max.
Shipping Weight, H <sup>+</sup> form	720-800g/l (46 lbs/cu.ft, approx.)
Total Exchange Capacity, H <sup>+</sup> form	4.0 eq/l min.
pH Range	4-14

## PURE RESIN COMPANY LIMITED

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## Suggested Operating Conditions

Maximum Temperature

H<sup>+</sup> form 120°C (248°F) max.

Minimum Bed Depth

0.8 m (30 inches)

Backwash Expansion

50-75% bed expansion

Regeneration

Regenerant Concentration 5 -10% HCl 0.5 -1% H<sub>2</sub>SO<sub>4</sub>

Flow Rate 2 to 7 BV/h 8-20 BV/h

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

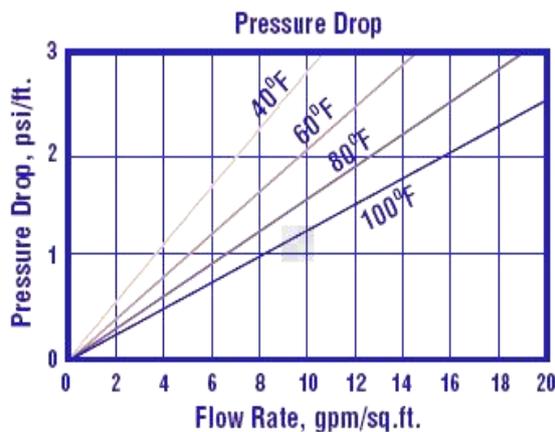
Fast Rinse Volume

35-60 gallons/cu.ft

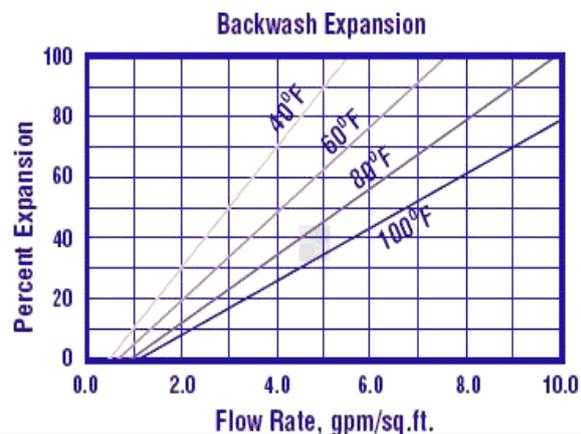
Service Flow Rate

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. This will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of **Pure PC200**.

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