

GC-001

Gel Strong Acid Cation Exchange Resin

Product Description & Applications

G-ion GC-001 is a light colored, gel type sulfonated polystyrene cation resin supplied in the sodium form as moist, tough uniform spherical beads. lization, deionization and chemical processing applications.

GC-001 certified by WQA to NSF/ANSI 44&61 for materials safety, iis well suited for softening, especially small scale domestic.

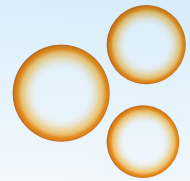


Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Polystyrene crosslinked with 8% DVB
Functional Group	R-(SO ₃)-M ⁺
Ionic Form, as shipped	Na ⁺
Physical Form And Appearance	Clear Spherical Beads
Puerility	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 ⁺ form	43-48%
Swelling Na ⁺ H ⁺ → Ca ²⁺ → Na ⁺	10% max. 5% max.
Shipping Weight, Na ⁺ form	780-880 g/l (51 lbs/cu.ft, approx.)
Total Exchange Capacity, Na ⁺ form	2.0 eq/l min.
pH Range	0-14

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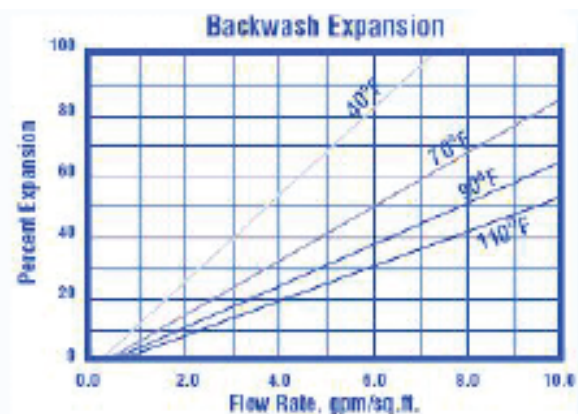
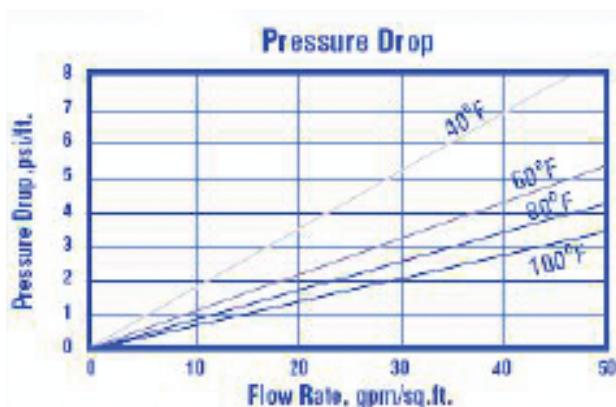
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Suggested operating conditions

Maximum Temperature	Na ⁺ form H ⁺ form	120°C (248°F) max. 100°C (212°F) max.
Minimum Bed Depth		0.6 m (24 inches)
Backwash Rate		25-50% Bed Expansion
Regeneration	Sodium Cycle Hydrogen Cycle Flow Rate Contact Time	8-20% NaCl 10% HCl, 2-8% H ₂ SO ₄ 2 to 7 BV/h (0.25 to 0.90 gpm/cu.ft) 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 G-ion GC-001 in the sodium form.