Product Name:	001x7 (Gel Strong Acid Cation Exchange Resin)

Product Data Sheet

001x7 is a high capacity premium grade bead form conventional gel polystyrene sulphonate cation exchange resin
designed for use in industrial or household water conditioning equipment. It removes the hardnessions, e.g. calcium
and magnesium, replacing them with sodium ions. When the resin bed is exhausted and hardness ions begin to break through, capacity is restored by regeneration with common salt.
The capacity obtained depends largely on the amount of salt used in the regeneration. 001x7 is also capable of removing dissolved iron, manganese, and also suspended matter by virtue of the filtering action of the bed.

Typical physical & Chemical characteristics:	Polymer Matrix Structure	Crosslinked Polystyrene Divinylbenzene
	Physical Form and Appearance	Clear spherical beads
	Whole Bead Count	95% min.
	Functional Groups	$R\text{-}SO_3^-$
	Ionic Form ,as shipped	Na
	Shipping Weight (approx.)	800 g/l (51 lb/ft3)
	Particle Size Range	+1.2 mm <5%, -0.3 mm <1%
	Moisture Retention, Na+ form	45-50%
	Swelling Na+→ H+	10% max.
	Ca2+→Na+	5% max.
	Specific Gravity, moist Na+ Form	1.27
	Total Exchange Capacity, Na+ form, wet, volumetric	1.9 eq/l min.
	Operating Temperature, Na+ Form	150°C (300oF) max.
	pH Range, Stability	0 - 14

Suggested Operating Condition:	Maximum Temperature	
	Na+ Form_____	120°C (248oF) max.
	H+ Form_____	100°C (212oF) max.
	Minimum Bed Depth_____	0.6m(24inches)
	Backwash Rate_____	25 to 50% Bed Expansion
	Regenerant Concentration Hydrogen Cycle_____ Sodium Cycle_____	6% HCl or 4 to 8% H_2SO_4 4% to 6% NaCl
	Regenerant Flow Rate _____	4 to 12 BV/h (0.5 to 1.5gpm/cu/ft.)
	Regenerant Contact Time _____	At least 30 minutes
	Regenerant Level _____	112 -300g/L (4 to 10 pounds/ cu/ft.)
	Displacement Rinse Rate _____	Same as Regenerant Flow Rate
	Displacement Rinse Volume _____	10 to 15 gallons/cu.ft.
	Fast Rinse Rate _____	Same as Service Flow Rate
	Fast Rinse Volume _____	35 to 60 gallons/cu.ft.
	Service Flow Rate _____	10-25m/h (2 to 10 gpm/cu/ft.)
Hydraulic Properties:	A. Pressure Drop: The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate, at various temperatures. B. Backwash : After each cycle the resin bed should be backwashed at a rate that expands the bed 25 to 50 percent. This will remove any foreign matter and reclassify the bed. The graph below shows the expansion characteristics of 001x7 in the sodium form.	