



# EPOCHEMMIE CO., LTD

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## DATA SHEET

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**Commodity:** Gel Strong Acid Cation Exchange Resin      **Type:** C002UN

For use in water softening applications

**Applications:** C002UN resin 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 hardness ions, 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. C002UN is also capable of removing dissolved iron, manganese, and also suspended matter by virtue of the filtering action of the bed.

### **Product Description:**

Typical physical & Chemical characteristics

Polymer Matrix Structure	Styrene Crosslinked with DVB
Physical Form and Appearance	Clear spherical beads
Whole Bead Count	95% min.
Functional Groups	R-SO <sub>3</sub> <sup>-</sup>
Ionic Form ,as shipped	Na
Total Exchange Capacity, Na <sup>+</sup> form, wet, volumetric	1.90 eq/l min.
Moisture Retention, Na <sup>+</sup> form	45-50%
Particle Size Range	0.50mm-0.71mm≥95%
Swelling Na <sup>+</sup> →H <sup>+</sup>	10% max.
Ca <sup>2+</sup> →Na <sup>+</sup>	5% max.
Shipping Weight (approx.)	770-870 g/l
Specific Gravity, moist Na <sup>+</sup> Form	1.25-1.28
pH Range, Stability	0 - 14
APHA	10

## **Suggested Operating Condition**

Maximum Temperature	
Na <sup>+</sup> Form	120°C (248°F) max.
H <sup>+</sup> Form	100°C (212°F) max.
Minimum Bed Depth	0.6m(24inches)
Backwash Rate	25 to 50% Bed Expansion
Regenerant Concentration	
Hydrogen Cycle	6% HCl or 4 to 8%H <sub>2</sub> SO <sub>4</sub>
Sodium Cycle	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.)