
001 × 7 Strong Acid Cation Exchange Resin for water softening

(Equivalent to Purolite C100E)

1. Description

001 × 7 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. Its acidity is similar to some inorganic acids, such as sulfuric acid [H₂SO₄] and hydrochloric acid [HCl]. It can be used as ion exchanger in alkaline, neutral and acidic mediums. This product has speedy exchange ability and good physical strength.

2. Typical Physical and Chemical Properties:

Items	Specification	
Polymer Matrix Structure	Crosslinked Polystyrene Divinylbenzene	
Physical Form and Appearance	Light yellow color Spherical particles	
Functional Groups	R-SO ₃ ⁻	
Ionic Form ,as shipped	Na ⁺	
Total Capacity, Na ⁺ form, wet, volumetric	≥1.9 eq/l min	
Moisture Retention, Na ⁺ form	45-50%	
Particle Size Range	0.315mm-1.25mm	
<300 μm (max.)	1%	
Uniformity Coefficient (max.)	1.6	
effective size	0.4-0.7mm	
Reversible Swelling	Na ⁺ → H ⁺ (max.)	10%
	Ca ²⁺ → Na ⁺ (max.)	5%
Shipping Weight (approx.)	770 -870g/l	
Specific Gravity, moist Na ⁺ Form	1.27	
Temperature Limit	120°C (250 °F)	
pH Range, Stability	0 - 14	

3. Suggested Operating Condition

Maximum Temperature	Na ⁺ Form	120°C (248°F) max.
	H ⁺ Form	100°C (212°F) max.
Backwash Rate	25 to 50% Bed Expansion	

Regenerant	Hydrogen Cycle	3% HCl or 2 to 3% H ₂ SO ₄
Concentration	Sodium Cycle	6% to 8% NaCl or 3% NaOH
Regenerant dosage	HCl or H ₂ SO ₄	HCl or H ₂ SO ₄ volume:resin volume =3:1
	NaCl	NaCl volume:resin volume =2:1
	NaOH	NaOH volume:resin volume =3:1
Regenerant Flow Rate		2 to 4 BV/h
Regenerant contact Time		At least 40 minutes
Service Flow Rate		10-25m/h

4.Applications

It is used in hard water softening,pure water manufacturing,water treatment, sugar manufacturing, pharmacy, monosodium glutamate, hydro-metallurgy industries and so on.