

SEPLITE® Monojet™ SC3100

Uniform particle size, Gel Strong acid cation resin for Industrial softening and demineralization applications

• Descriptions

SEPLITE® Monojet™ SC3100 Ion Exchange Resin is suitable for using in industrial softening and demineralization applications especially for high performance and cost-effective requirements. Thanks to the uniform particle size and excellent chemical properties, this resin is able to yield high operating capacity and help users to save the chemical regenerant and rinsing water.

SEPLITE® Monojet™ SC3100 is compatible with co-current or counter-current systems as well as mixed bed or single bed. The resin could be available in Na⁺ or H⁺ form.

The resins are produced fully in accordance with the FDA (US Food & Drug Administration), also meeting the regulations prescribed under Resolution ResAP (2004) 3 on ion exchange and adsorbent resins used in the processing of foodstuffs.

Please follow our start-up recommendations which is available upon request, when using our products in food applications.

• Physical and Chemical Characteristics

Matrix Structure	Gel, Styrene-divinylbenzene	
Functional group	Sulfonic acid	
Shipping form	Na ⁺ (H ⁺ is also available)	
Physical Appearance	Amber to dark brown translucent spherical beads	
Particle size (mm)	0.60±0.05mm <0.3mm ≤0.1% ≥0.85mm ≤3.0%	
Moisture content (%)	42-48 (Na ⁺ Form)	50-55 (H ⁺ Form)
Total Capacity(eq/L)	≥2.0 (Na ⁺ Form)	≥1.8 (H ⁺ Form)
Bulk Density (g/l)	750-850	720-820
Density (g/l)	1260-1300	1170-1220
Whole beads count (%)	≥95	≥95
Uniformity coefficient	≤1.1	≤1.1

• Applications

- Industrial softening
- Industrial Demineralization

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Recommended Operating Conditions

Operating temp.	max. °C	120
Operating pH		0-14
Min. Bed depth	mm	800
Pressure drop	max. kPa	280
Backwash flow rate	max. m/h	15-25 (at 20°C)
Backwash Bed expansion	Approx. vol. %	4 (at 20°C, per m/h)
Backwash Freeboard	vol. %	60-100
Regenerant (counter-current regeneration)		HCl / H ₂ SO ₄ / NaCl
Regeneration level	Approx. g/l	50 / 80/ 60
Regeneration concentration	wt. %	4-6 / 1.5-3 / 8-10
Contact time	Minutes	15-20
Regeneration flow rate	Approx. m/h	5 / 10-20
Rinse water requirement(slow/fast)	Approx. BV	2-5
Regenerant (co-current regeneration)		HCl / H ₂ SO ₄ / NaCl
Regeneration level	Approx. g/l	100 / 150 / 120
Regeneration concentration	wt. %	6-10 / 1.5-3 / 8-10
Contact time	Minutes	30-40
Regeneration flow rate	Approx. m/h	5
Rinse water requirement(slow/fast)	Approx. BV	4-7

Hydraulic Characteristics

Typical values of pressure drop across a bed of SEPLITE® Monojet™ SC3100 are given for a range of operating flow rate in Fig. 1.

Fig. 2 shows the Bed expansion which is a function of flow rate and temperature. Be cautious to avoid loss by accidental over-expansion of the bed.

Fig. 1 Pressure Drop

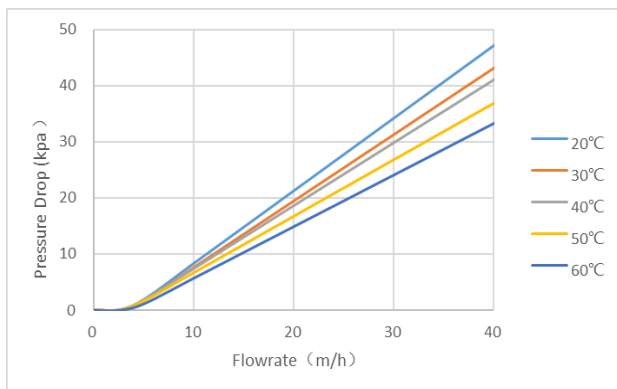
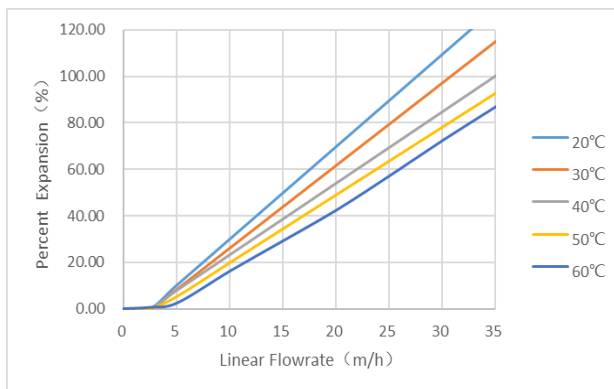


Fig. 2 Backwash Expansion



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•Precautions

Resins should be stored in sealed containers or bags where temperature was above 0℃ in dry conditions without exposure to direct sunlight.

Do not mix ion exchange resin with strong oxidizing agents; otherwise it will cause violent reactions.

In case of eyes contact with resins, rinse eyes immediately with plenty of water, and consult a specialist.

Material and samples must be disposed according to local regulations.

Dry polymers will expand when become wetted and may cause an exothermic reaction.

Spilled materials may be slippery.

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