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DOWEX 21K XLT

A Uniform Particle Size, High Capacity, Strong Base Anion Exchange Resin for Mineral Processing Applications

Product	Type	Matrix	Functional group
DOWEX* 21K XLT	Type I strong base anion	Styrene-DVB, gel	Quaternary amine

Guaranteed Sales Specifications

Total exchange capacity, min.	eq/L	1.4
Water content	%	50 - 60
Bead size distribution		
Volume median diameter	µm	525 - 625
Uniformity coefficient, max.	%	1.1

Typical Physical and Chemical Properties

Ionic form as delivered		Cl^-
Total swelling ($Cl \Rightarrow OH$), approx.	%	18 - 20
Whole uncracked beads, min.	%	90
Particle density, approx.	g/mL	1.08
Shipping weight, approx.	g/L	670
	lbs/ft^3	42

Recommended Operating Conditions

- Maximum operating temperature:
  - OH^- form: 60°C (140°F)
  - Cl^- form: 100°C (212°F)
- pH range: 0 - 14
- Bed depth, min.: 800 mm (2.6 ft)
- Flow rates:
  - Service/fast rinse: 5 - 60 m/h (2 - 24 gpm/ft^2)
  - Backwash: See figure 1
  - Co-current regeneration/displacement rinse: 1 - 10 m/h (0.4 - 4 gpm/ft^2)
  - Counter-current regeneration/displacement rinse: 5 - 20 m/h (2 - 8 gpm/ft^2)
- Total rinse requirement: 3 - 6 Bed volumes
- Regenerant:
  - Type: NaCl/Carbonate
  - Temperature: Ambient or up to 50°C (122°F) for silica removal
- Organic loading, max.: 3g $KMnO_4$/L resin

Typical properties and applications

DOWEX 21K XLT type 1 strong base anion resin has excellent kinetics, excellent regeneration efficiency and outstanding physical stability. The uniform sized beads give maximum performance for all packed bed systems. DOWEX 21K XLT represents the state-of-the-art in mineral processing resins.

Packaging

5 cubic foot fiber drums

Figure 1. Pressure Drop vs. Flow Rate

For DOWEX 21K Resins, Cl, 77 deg. F

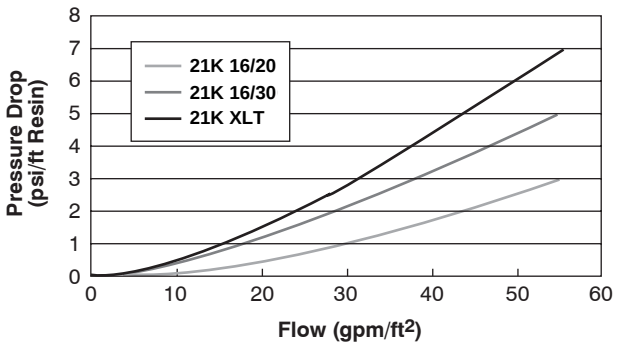

Figure 2. Backwash Expansion vs. Flow Rate

For DOWEX 21K Resins, Cl, 77 deg. F