

**DOWEX 21K 16/20**

A High Efficiency, Large Bead, Strong Base Anion Exchange Resin for Mineral Processing Applications

Product	Type	Matrix	Functional group
DOWEX* 21K 16/20	Type I strong base anion	Styrene-DVB, gel	Quaternary amine

Guaranteed Sales Specifications		Cl ⁻ form
Total exchange capacity, min.	eq/L	1.2
Bead size distribution		
Thru 20 mesh, max.	%	10
Thru 25 mesh, max.	%	2

Typical Physical and Chemical Properties		Cl ⁻ form
Water content	%	50 - 58
Whole uncracked beads	%	90 - 100
Total swelling (Cl ⁻ ⇒ OH ⁻)	%	20
Particle density	g/mL	1.08
Shipping weight	g/L	690
	lbs/ft ³	43

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 - 50 m/h (2 - 20 gpm/ft²)
Backwash See figure 1
Co-current regeneration/displacement rinse 1 - 10 m/h (0.4 - 4 gpm/ft²)
- 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 KMnO₄/l resin

Typical properties and applications

DOWEX 21K 16/20 type I strong base anion resin has excellent kinetics, excellent regeneration efficiency and outstanding physical stability. This enhanced-porosity gel bead product is made by a special process giving enhanced resistance to organics and fast equilibrium rates. The DOWEX 21K family of resins is specially suited for mineral processing and groundwater remediation applications. DOWEX 21K 16/20 type I strong base resin is suited for fluidized-bed and Resin-in-Pulp applications.

Packaging

5 cubic foot fiber drums

Figure 1. Pressure Drop vs. Flow Rate

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

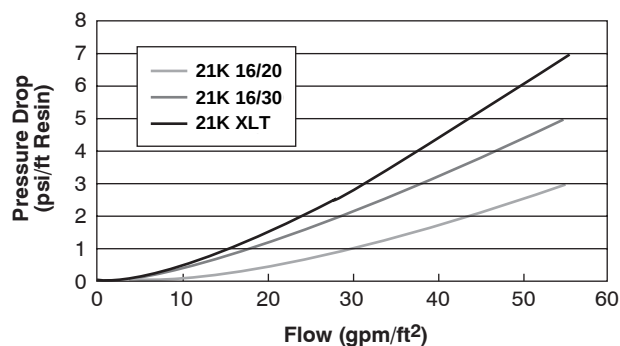
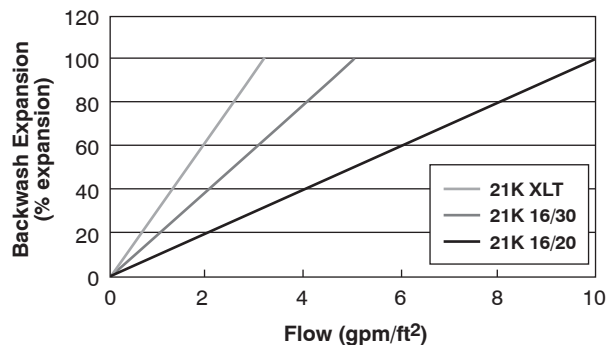


Figure 2. Backwash Expansion vs. Flow Rate

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



Warning: Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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