



DOWEX™ MONOSPHERE™ 99 K/320

Chromatographic Separation Resin for Size Exclusion and Ion Exclusion

Product	Type	Matrix	Functional group
DOWEX™ MONOSPHERE™ 99 K/320	Strong acid cation	Styrene-DVB, gel	Sulfonate

Typical Physical and Chemical Properties

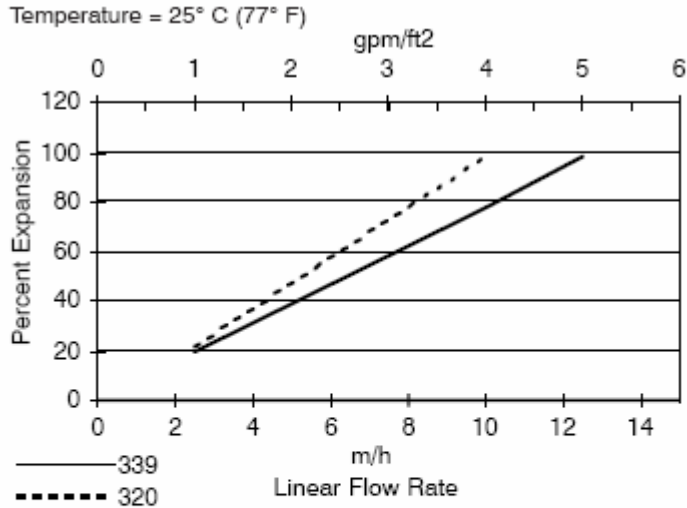
Ionic form as delivered			K ⁺
Total capacity, min.	eq/L		1.5 (H ⁺ form)
Water content	%		57 - 61 (H ⁺ form)
Whole uncracked beads, min.	%		98
Particle density	g/mL		1.32
Apparent bulk density:**			
Backwashed, settled and drained	g/L lbs/ft ³		800 - 850 50 - 53
Tapped and settled	g/L lbs/ft ³		815 - 880 51 - 55

Bead Size Distribution (Light Obscuration Instrument Particle Size)

		Microns
Volume median diameter		317 ± 15
Broad range	min. 90%	287 - 352
Narrow range	min. 75%	302 - 337
Fine fines	max. 1%	< 262
Coarse fines	max. 4%	< 282
Fine coarse	max. 4%	> 383
Coarse coarse	max. 1%	> 453

** As per the backwashed and settled density of the resin, determined by ASTM D-2187.

Figure 1. Backwash Expansion Data

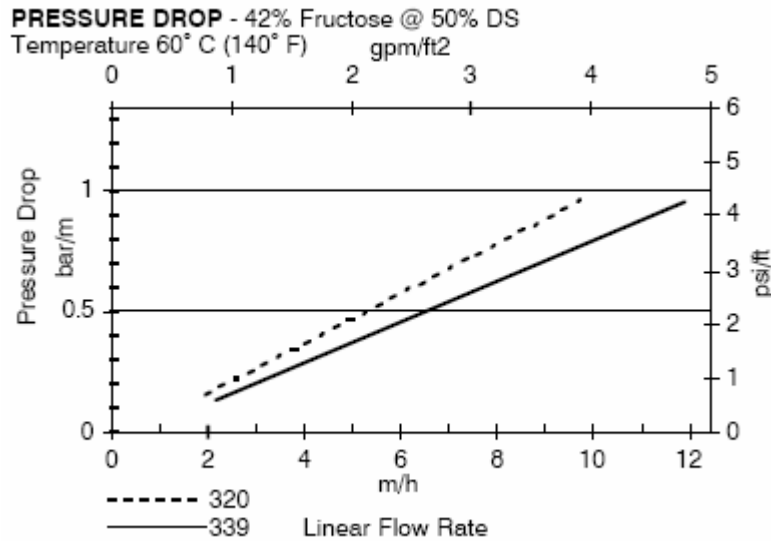


For other temperatures use:

$$F_T = F_{77°F} [1 + 0.008 (T_F - 77)], \text{ where } F \equiv \text{gpm/ft}^2$$

$$F_T = F_{25°C} [1 + 0.008 (1.8T_C - 45)], \text{ where } F \equiv \text{m/h}$$

Figure 2. Pressure Drop Data



DOWEX™ Ion Exchange Resins

For more information about DOWEX resins, call the Dow Water Solutions business:

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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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