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DOWEX™ UPCORE™ Mono C-600

A Uniform Particle Size, Strong Acid Cation Exchange Resin Specifically Designed for the UPCORE System

Product	Type	Matrix	Functional group
DOWEX™ UPCORE™ Mono C-600	Strong acid cation	Styrene-DVB, gel	Sulfonic acid

Guaranteed Sales Specifications		Na ⁺ form	H ⁺ form
Total exchange capacity, min.	eq/L	2.0	1.8
	kg/ft ³ as CaCO ₃	43.7	39.3
Water content	%	42 - 48	50 - 56
Bead size distribution†			
Mean particle size	µm	585 ± 50	600 ± 50
Uniformity coefficient, max.		1.1	1.1
> 850 µm, max.	%	5	5
< 300 µm, max.	%	0.5	0.5
Whole uncracked beads, min.	%	95	95

Typical Physical and Chemical Properties		Na ⁺ form	H ⁺ form
Total swelling (Na ⁺ → H ⁺)	%	8	8
Particle density	g/mL	1.28	1.22
Shipping weight**	g/L	820	800
	lbs/ft ³	51	50

Recommended Operating Conditions

- Maximum operating temperature 120°C (250°F)
- pH range 0 - 14
- Bed depth, min. 1,200 mm (4 ft)
- Pressure drop, design max. 1.5 bar (22 psi)
- Pressure drop, max. 2.5 bar (37 psi)
- Flow rates:
 - Service/fast rinse 5 - 60 m/h (2 - 24 gpm/ft²)
 - Regeneration/displacement rinse 5 - 20 m/h (2 - 8 gpm /ft²)
- Total rinse requirement 2 - 5 Bed volumes
- Regenerant 8 - 12% NaCl, 4 - 6% HCl, or 1 - 4% H₂SO₄,

† For additional particle size information, please refer to Particle Size Distribution Cross Reference Chart (Form No. 177-01775).

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

Typical Properties and Applications

DOWEX™ UPCORE™ Mono C-600 strong acid cation exchange resin is a uniform particle size resin specifically designed for use in the UPCORE packed bed counter-current regeneration system. It is well suited for use in both demineralization and softening applications.

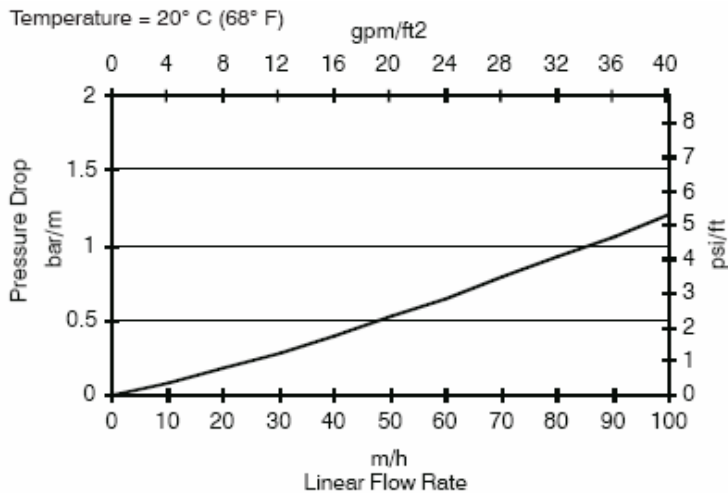
DOWEX UPCORE Mono C-600 resin has a smaller average particle diameter than conventional polydispersed cation resin. Its smaller, uniform size enhances operating capacity and regeneration efficiency while maintaining a moderate pressure drop.

DOWEX UPCORE Mono C-600 resin also has outstanding resistance to attrition due to compressive and osmotic stress.

Packaging

25 liter bags or 5 cubic feet fiber drums

Figure 1. Pressure Drop Data



For other temperatures use:

$$P_T = P_{20^\circ\text{C}} / (0.026 T_{\text{C}} + 0.48), \text{ where } P \equiv \text{bar/m}$$

$$P_T = P_{68^\circ\text{F}} / (0.014 T_{\text{F}} + 0.05), \text{ where } P \equiv \text{psi/ft}$$

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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