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DOW

DOWEX UPCORE Mono A-500

A Uniform Particle Size, Strong Base Anion Exchange Resin Specifically Designed for the UPCORE System

Product	Type	Matrix	Functional group
DOWEX* UPCORE* Mono A-500	Type 1 strong base	Styrene-DVB, gel	Quaternary amine

Guaranteed Sales Specifications		Cl^- form
Total exchange capacity, min.	eq/l	1.3
	kgr/ft^3 as $CaCO_3$	28.4
Water content	%	50 - 58
Bead size distribution†		
Mean particle size	µm	575 ± 50
Uniformity coefficient, max.		1.1
>850µ, max.	%	5
<300µ, max.	%	0.5
Whole uncracked beads, min.	%	95

Typical Physical and Chemical Properties		Cl^- form
Total swelling (Cl^- →OH^-)	%	20
Particle density	g/ml	1.08
Shipping weight	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.	1200 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/ft^2)
Regeneration/displacement rinse	4-10 m/h (1.6-4 gpm/ft^2)
Total rinse requirement	2-4 Bed volumes
Regenerant	2-5% NaOH

†For additional particle size information, please refer to the Particle Size Distribution Cross Reference Chart (Form No 177-01775/CH 171-476-E).

*Trademark of The Dow Chemical Company

DOWEX Ion Exchange Resins

Typical properties and applications:

DOWEX* UPCORE* Mono A-500 strong base anion resin is a uniform particle size, gellular, type 1 anion resin designed for use in the UPCORE packed bed counter-current regeneration system.

The absence of large beads in DOWEX UPCORE Mono A-500 resin results in high operating capacity and good resistance to silica fouling.
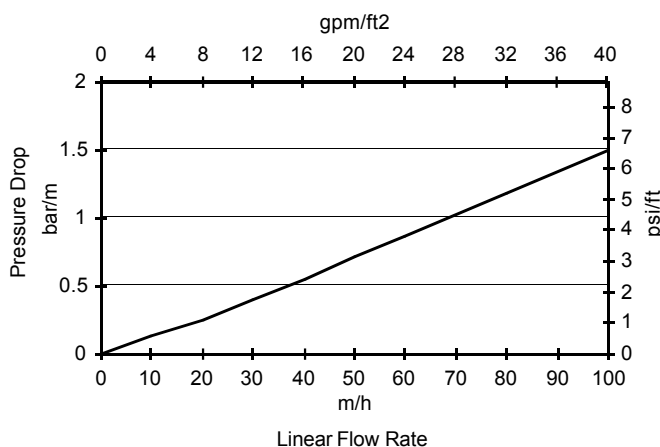
DOWEX UPCORE Mono A-500 resin has an excellent resistance to mechanical and osmotic stress which helps minimize resin attrition.

Packaging
25 liter bags or 5 cubic feet fiber drums.

Figure 1. Pressure Drop Data

Temperature = 20° C (68° F)

Linear Flow Rate

For other temperatures use:

$P_T = P_{20°C} / (0.026\ T_{°C} + 0.48)$, where $P \equiv$ bar/m
$P_T = P_{68°F} / (0.014\ T_{°F} + 0.05)$, where $P \equiv$ psi/ft

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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