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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 anion	Styrene-DVB, gel	Quaternary amine

Guaranteed Sales Specifications		Cl^- form
Total exchange capacity, min.	eq/L	1.3
	kgr/ft³ as $CaCO_3$	28.4
Water content	%	50 - 58
Bead size distribution†		
Mean particle size	μm	575 ± 50
Uniformity coefficient, max.		1.1
>850 μ, max.	%	5
<300 μ, max.	%	0.5
Whole uncracked beads, min.	%	95

Typical Physical and Chemical Properties		Cl^- form
Total swelling ($Cl^- \rightarrow OH^-$)	%	20
Particle density	g/mL	1.08
Shipping weight**	g/L	670
	lbs/ft³	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.: 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: 4-10 m/h (1.6-4 gpm /ft²)
- Total rinse requirement: 2 - 4 Bed volumes
- Regenerant: 2-5% NaOH

† 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

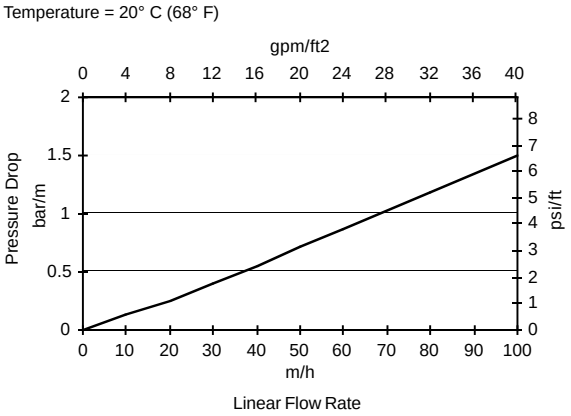
DOWEX™ UPCORE™ Mono A-500 strong base anion resin is a uniform particle size, gellular, type 1 anion exchange resin designed for use in the UPCORE packed bed counter-current regeneration system.

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



For other temperatures use:

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

DOWEX™ Ion Exchange Resins
For more information about DOWEX resins, call the Dow Water Solutions business:

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http://www.dowwatersolutions.com

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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