DOWEX MB-50

A Ready-for-use Regenerable Mixed Bed Resin for Production of High Quality Water in Lab and Industrial Applications

Product	Resin ratio	Matrix	Functional group
DOWEX* MB-50	1.2:1 by equivalent, cation:anion	Styrene-DVB gel	Sulfonic acid, quaternary amine

Guaranteed Sales Specifications		OH^- form	H^+ form
Total exchange capacity, min.	eq/l	1.2	1.8
	kgr/ft³ as $CaCO_3$	26.2	39.3
Water content	%	60 max.	50-56
Bead size distribution†:			
0.3-1.2 mm, min.	%	90	90
Conversion (OH), min.	%	90	—
Cl, max.	%	1	—

Typical Physical and Chemical Properties		OH^- form	H^+ form
Particle density	g/ml	1.08	1.22
Shipping weight	g/l	720	720
	lbs/ft³	45	45

Recommended Operating Conditions

- Maximum operating temperature: 60°C (140°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: 10-15 m/h (4-6 gpm/ft²)
  - Regeneration/displacement rinse: 2-10 m/h (0.8-4 gpm/ft²)
- Total rinse requirement: 3-6 Bed volumes
- Regenerant: 1-8% H_2SO_4 or 4-8% HCl and 4-8% NaOH
- Operating capacity, typical: 0.5 eq/l (11 kgr/ft³ as $CaCO_3$)
- Treated water quality, typical
  - Conductivity: < 0.2 μS/cm
  - Silica: 20-30 ppb

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

Typical Properties and Applications

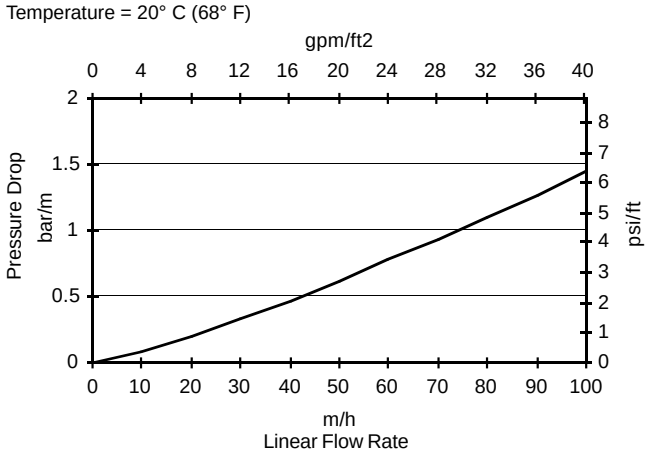
DOWEX MB-50 resin is a ready-to-use regenerable mixture of DOWEX HCR-S (H) cation exchange resin and DOWEX SBR LC NG (OH) anion exchange resin.

DOWEX MB-50 resin is used for production of high quality water for laboratory and industrial use.

Packaging

25 liter bags

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 Liquid Separations business:
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