



DOWEX MB-50

A Ready-for-use Regenerable Mixed Bed Resin for Production of High Quality Water in Domestic, Lab & Industrial Applications.

Product	Resin ratio	Matrix	Functional group
DOWEX* MB-50	1.2:1 by equivalents 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
	kg/ft ³ as CaCO ₃	26.2	39.3
Water content	%	60 max.	50 - 56
Bead size distribution [†]			
>1.2 mm, max. (16 mesh)	%	2	-
<0.42 mm, max. (40 mesh)	%	1	-
<0.3 mm, max. (50 mesh)	%	0.2	-
Whole uncracked beads, min.	%	95	90 - 100 [†]
Crush strength			
Average, min.	g/bead	350	-
>200 g/bead, min.	%	95	-

Typical Physical and Chemical Properties		OH ⁻ form	H ⁺ form
Particle density	g/ml	1.08	1.22
Shipping weight	g/l	705	
	lbs/ft ³	44	

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/ft ²)
Backwash	10-15 m/h (4-6 gpm/ft ²)
Regeneration/displacement rinse	2-10 m/h (0.8-4 gpm/ft ²)
Total rinse requirement	3-6 Bed volumes
Regenerant	1-8% H ₂ SO ₄ or 4-8% HCl and 4-8% NaOH
Operating capacity, typical	0.5 eq/l (11 kg/ft ³ as Ca CO 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/CH 171-476-E).

^{††}Typical properties, not guaranteed sales specifications.

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DOWEX

Ion Exchange Resins

For more information about DOWEX resins,
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<http://www.dow.com/liquidseps>

Typical properties and applications:

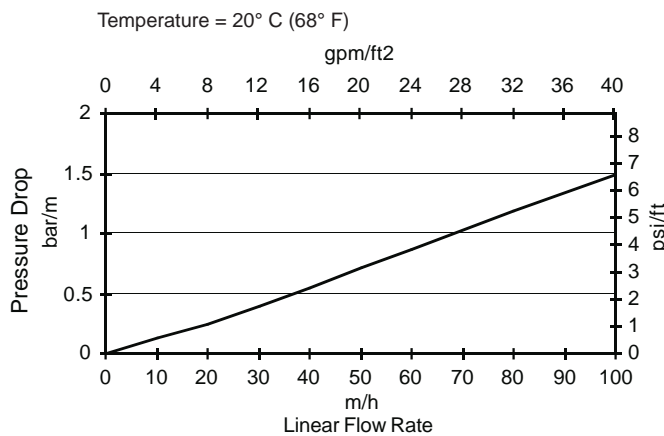
DOWEX* MB-50 resin is a ready-to-use regenerable mixture of DOWEX HCR-S (H) cation exchange resin and DOWEX SBR LC NG (OH) anion exchange resin.

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

Packaging

25 liter bags or 5 cubic feet fiber drums.

Figure 1. Pressure Drop Data



For other temperatures use:

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

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

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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