



## 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 <sup>-</sup> form	H <sup>+</sup> form
Total exchange capacity, min.	eq/l	1.2	1.8
	kgr/ft <sup>3</sup> as CaCO <sub>3</sub>	26.2	39.3
Water content	%	60 max.	50-56
Bead size distribution <sup>†</sup> :			
0.3-1.2 mm, min.	%	90	90
Conversion (OH), min.	%	90	—
Cl, max.	%	1	—

Typical Physical and Chemical Properties		OH <sup>-</sup> form	H <sup>+</sup> form
Particle density	g/ml	1.08	1.22
Shipping weight	g/l	720	720
	lbs/ft <sup>3</sup>	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/ft<sup>2</sup>)
  - Backwash 10-15 m/h (4-6 gpm/ft<sup>2</sup>)
  - Regeneration/displacement rinse 2-10 m/h (0.8-4 gpm/ft<sup>2</sup>)
- Total rinse requirement 3-6 Bed volumes
- Regenerant 1-8% H<sub>2</sub>SO<sub>4</sub> or 4-8% HCl and 4-8% NaOH
- Operating capacity, typical 0.5 eq/l (11 kgr/ft<sup>3</sup> as CaCO<sub>3</sub>)
- Treated water quality, typical
  - Conductivity < 0.2 μS/cm
  - Silica 20-30 ppb

<sup>†</sup> 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.

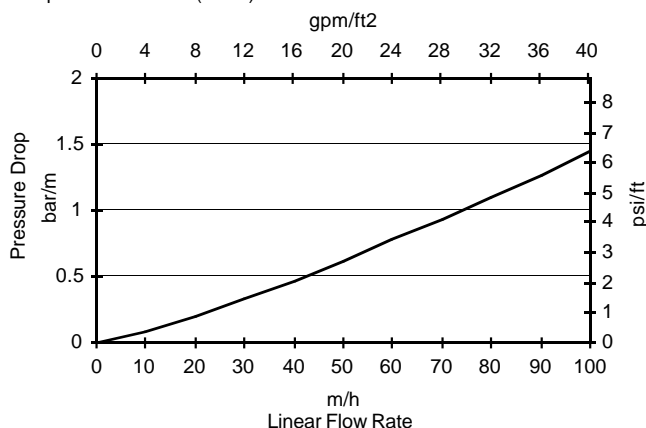
DOWEX MB-50 resin is used for production of high quality water for laboratory and industrial use.

## Packaging

25 liter bags

**Figure 1. Pressure Drop Data**

Temperature = 20° C (68° F)



### For other temperatures use:

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

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

### DOWEX Ion Exchange Resins

For more information about DOWEX resins, call the Dow Liquid Separations business:

North America: 1-800-447-4369  
Latin America: (+55) 11-5188-9277  
Europe: (+32) 3-450-2240  
Japan: (+81) 3-5460-2100  
Australia: (+61) 3-9226-3545  
<http://www.dowex.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.

Notice: No freedom from any patent owned by Seller or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

