

**DOWEX™ MARATHON™ MR-3**

Uniform Particle Size, High Capacity, Mixed Ion Exchange Resin for Demineralization

Product	Type	Matrix	Functional group
DOWEX™ MARATHON™ MR-3	1:1 by equivalents 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	1.0	1.9
	kg/ft <sup>3</sup> as CaCO <sub>3</sub>	21.9	41.5
Water content	%	60 - 72	46 - 51
Uniformity coefficient, max.		1.1	1.1
Whole uncracked beads, min.	%	90	90

Typical Physical and Chemical Properties		OH <sup>-</sup> form	H <sup>+</sup> form
Mean particle size <sup>†</sup>	μm	610 ± 50	760 ± 50
Particle density	g/mL	1.06	1.22
Shipping weight	g/L		672
	lbs/ft <sup>3</sup>		42

Recommended Operating Conditions	• Maximum operating temperature	60°C (140°F)
	• pH range	0 - 14
	• Bed depth, min.	800 mm (2.6 ft)

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

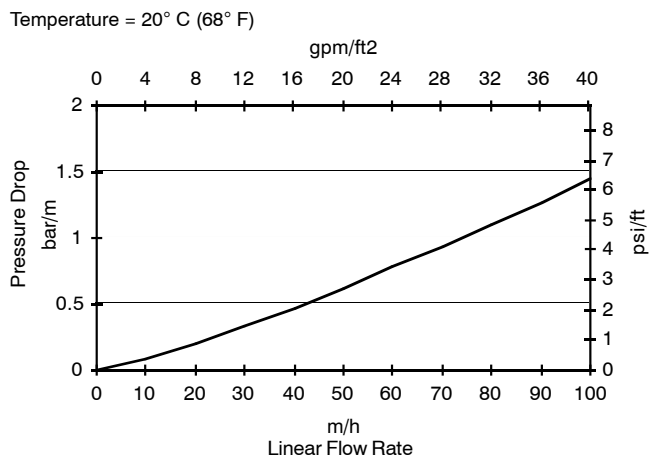
## Typical properties and applications

DOWEX™ MARATHON™ MR-3 ion exchange resin is a 1:1 equivalent mixture of DOWEX MARATHON A (OH) anion and DOWEX MARATHON C-10 (H) cation resins. This product is a ready-to-use regenerable uniform particle size mixed resin for demineralization.

## Packaging

25 liter bags or 5 cubic foot fiber drums

Figure 1. Pressure Drop Data



### For other temperatures use:

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

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

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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