

**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 ⁻ form	H ⁺ form
Total exchange capacity, min.	eq/L	1.0	1.9
	kgr/ft ³ as CaCO ₃	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 ⁻ form	H ⁺ form
Mean particle size [†]	μm	610 ± 50	760 ± 50
Particle density	g/mL	1.06	1.22
Shipping weight	g/L		672
	lbs/ft ³		42

**Recommended
Operating
Conditions**

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

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

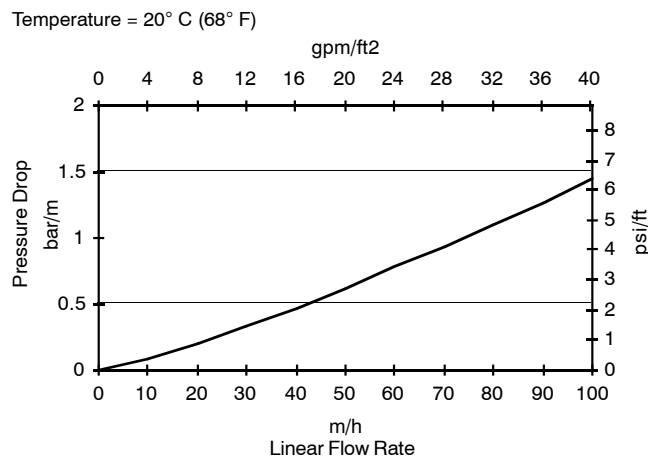
Typical properties and applications

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:

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

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

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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