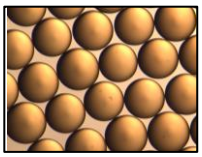
Product Data Sheet

DOWEX MARATHON™ 1300 Ion Exchange Resin

Uniform Particle Size, Strong Acid Cation Exchange Resin for Industrial Demineralization Applications

Description



DOWEX MARATHON™ 1300 Ion Exchange Resin is designed for water utility operators and power plant chemists who are concerned with achieving maximum water and chemical efficiency. The polymer density and particle size of the resin have been designed to operate with DOWEX MARATHON 8300 in new and retrofitted layered beds. Additionally, DOWEX MARATHON 1300 can be used in working and polishing mixed beds when very low sodium leakage and conductivity is a chief concern.

Typical Physical and Chemical Properties**

Matrix	Styrene-divinylbenzene, gel	
Type	Strong acid cation	
Functional Group	Sulfonic acid	
Physical Form	Dark brown, translucent, spherical beads	
Ionic Form as Shipped	**H^+ Form**	**Na^+ Form**
Typical Exchange Capacity	2.1 eq/L	2.2 eq/L
Minimum Exchange Capacity	2.0 eq/L	2.1 eq/L
Water Retention Capacity	45 – 51%	38 – 45%
Particle Size		
Particle Diameter [a]	600-700 µm	
Uniformity Coefficient	≤ 1.1	
Swelling	$Na^+ \rightarrow H^+$: 7%	
Bulk Density, as shipped [b]	785 g/L	850 g/L

[a] For additional particle size information, please refer to the Particle Size Distribution Cross Reference Chart (Form No. 177-01775).
[b] As per the backwashed and settled density of the resin, determined by ASTM D-2187.

Form No. 177-03630, Rev. 1
November 2016

Suggested Operating Conditions**

Maximum Operating Temperature [c]	130°C (266°F)		
pH Range	0 – 14		
Regenerant	H_2SO_4	HCl	NaCl
Concentration	1 – 8%	4 – 8%	8 – 12%

[c] For additional information please refer to The Recommended Operating Conditions Tech-Facts (Form 177-03705 & 177-03729)

Hydraulic Characteristics

Bed expansion of DOWEX MARATHON™ 1300 H Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Pressure drop data for DOWEX MARATHON 1300 H as a function of service flowrate and temperature is shown in Figure 2. Pressure drop data are valid at the start of the service run with clean water.

Figure 1: Backwash Expansion

Temperature = 10 – 60°C (50 – 140°F)

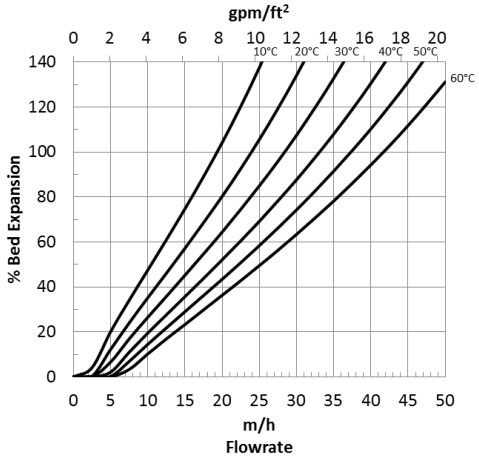
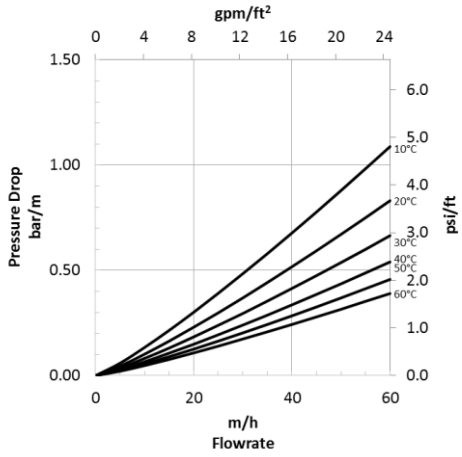


Figure 2: Pressure Drop

Temperature = 10 – 60°C (50 – 140°F)



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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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