PRODUCT SPECIFICATION SHEET

MAGNA

MBD-16

MIXED BED

HIGH-PURITY MIXED BED
10% CROSSLINKED CATION
POLYSTYRENIC GEL
H / OH FORM

ResinTech MBD-16 is a 2:3 volumetric mixture of CG10-H-BL (a dark-colored hydrogen form cation resin) and SBG1P-OH (a hydroxide form type 1 porous strong base anion resin). The volume ratio is close to 1:1 on an equivalent basis and the component resins are chosen to separate easily for regeneration. MBD-16 is intended for use in all mixed bed deionization applications that require high resistivity and high throughput capacity.

APPLICATIONS

- Portable Exchange Deionization (PEDI)

TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS	
Polymer Matrix	Styrenic Gel
Ionic Form	Hydrogen & Hydroxide
Functional Group	Sulfonic Acid / Trimethylamine
Physical Form	Spherical Beads
Particle Size	16 to 50 US Mesh (297 - 1190 µm)
% < 50 mesh (300µm)	< 1%
Reversible Swelling	H/OH to Na/Cl -15% to -17%
Temp Limit	250°F (121°C)
Capacity (meq/mL)	0.6
Moisture Retention	56% to 64%
Shipping Weight	42 - 44 lbs/ft³ (673 - 705 g/L)
Color	Brown / Black & Amber
Regenerability	Yes

PACKAGING OPTIONS

- 1 ft³ bags
- 1 ft³ boxes
- 1 ft³ drums
- 7 ft³ drums
- 42 ft³ supersacks

Revision 1.0
ResinTech, Inc.®

MADE IN AMERICA

RESINTECH® INC.
INNOVATIONS IN ION EXCHANGE

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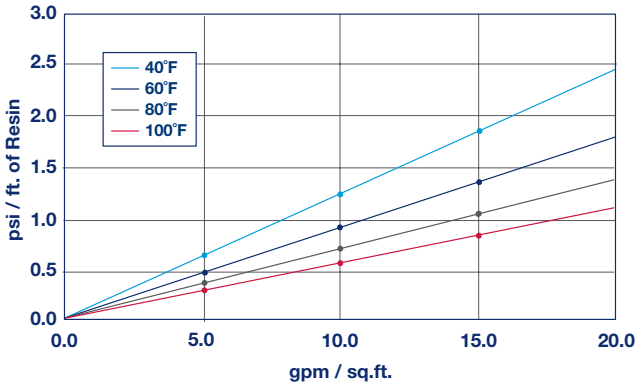
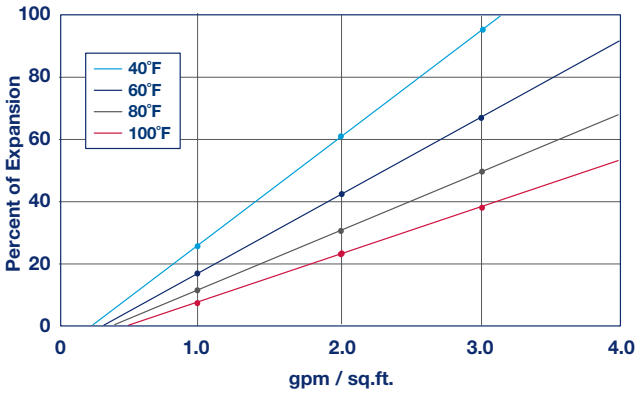
Pressure Loss



Backwash Expansion



THROUGHPUT CAPACITY (Gal/cu. ft.)			
TDS (ppm as CaO_3) Conductivity (uS/cm)	No CO_2 or SiO_2	5 ppm CO_2 or SiO_2	10 ppm CO_2 or SiO_2
2/5	111,834	31,953	18,639
5/12.5	44,734	22,367	14,911
10/25	22,367	14,911	11,183
20/50	11,183	8,947	7,456
50/125	4,473	4,067	3,728
100/250	2,237	2,130	2,033
200/500	1,118	1,091	1,065
500/1250	447	443	439
1,000/2500	224	223	221

Mixed Bed throughput capacity is based on the stated inlet conductivity of neutral pH waters and run to a 1 uS/cm endpoint. TDS is based on NaCl (2.5uS/cm/ppm as $CaCO_3$). Different salts may have different contributions to TDS. Capacity is based on the anion component and is for virgin resin. Following the initital exhaustion and regeneration subsequent cycles will likely be shorter, depending on how skillfully the resins are separated, regenerated, and remixed.

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	140˚F
Maximum intermittent temperature	180˚F
Minimum bed depth	24 inches
Backwash expansion	50 to 75 percent
Maximum pressure loss	25 psi
Operating pH range	2 to 12 SU
Service flow rate	
Working	1 to 5 gpm per cu. ft.
Polishing	3 to 15 gpm per cu. ft.

Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.
For operation outside these guidelines, contact ResinTech Technical Support

PORTABLE EXCHANGE DEIONIZATION (PEDI)

ResinTech MBD-16 can be used in almost all PEDI applications to remove bulk TDS from raw waters or to remove trace levels of TDS following reverse osmosis or other membrane processes. The mixed resin can be separated into its components, CG10-H-BL and SBG1, for regeneration, and reused hundreds or thousands of times. The use of the more dense CG10-H-BL cation component in MBD-16 allows for more efficient resin separation compared to MBD-10 or MBD-15. This resin color difference is helpful to verify resin separation ahead of the regeneration process.

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