

## MAGNA MBD-15

MIXED BED

**HIGH-PURITY MIXED BED  
POLYSTYRENIC GEL  
H / OH FORM**

ResinTech MBD-15 is a 2:3 volumetric mixture of CG8-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-15 is intended for use in all mixed bed deionization applications that require high resistivity and high throughput capacity.

### APPLICATIONS

- Portable Exchange Deionization (PEDI)
- In-Place Regeneration

TYPICAL PROPERTIES & PHYSICAL CHARACTERISTICS	
<b>Polymer Matrix</b>	Styrenic Gel
<b>Ionic Form</b>	Hydrogen & Hydroxide
<b>Functional Group</b>	Sulfonic Acid / Trimethylamine
<b>Physical Form</b>	Spherical Beads
<b>Particle Size</b>	16 to 50 US Mesh (297 - 1190 µm)
<b>% &lt; 50 mesh (300µm)</b>	< 1%
<b>Reversible Swelling</b>	H/OH to Na/Cl -15% to -17%
<b>Temp Limit</b>	°F (-18°C)
<b>Capacity (meq/mL)</b>	0.55
<b>Moisture Retention</b>	57% to 65%
<b>Shipping Weight</b>	42 - 44 lbs/ft <sup>3</sup> (673 - 705 g/L)
<b>Color</b>	Brown / Black & Amber
<b>Regenerability</b>	Yes

### PACKAGING OPTIONS

- 500 ml samples
- 1 ft<sup>3</sup> drums
- 1 ft<sup>3</sup> bags
- 7 ft<sup>3</sup> drums
- 1 ft<sup>3</sup> boxes
- 42 ft<sup>3</sup> supersacks

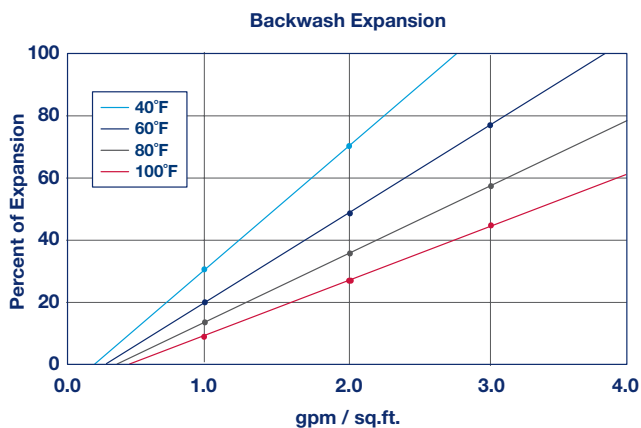
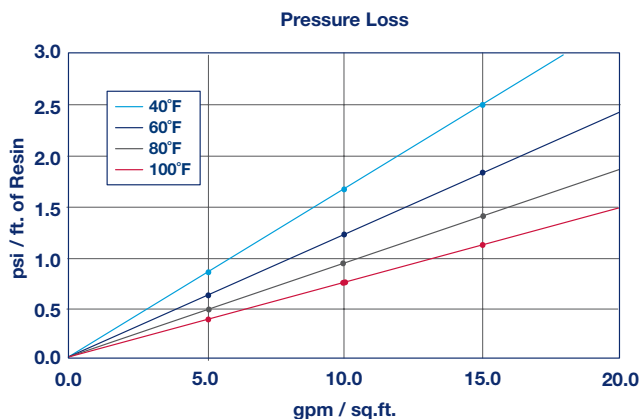
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### PORTABLE EXCHANGE DEIONIZATION (PEDI)

ResinTech MBD-15 can be used in PEDI applications to remove bulk TDS from raw waters or to remove trace levels of TDS following reverse osmosis or other desalination processes. The mixed resin can be separated into its components, CG8-H-BL and SBG1P-OH, for regeneration, and reused hundreds or thousands of times. The cation component, CG8-H-BL, is dark in color and provides optimized color difference from SBG1P-OH. This color difference is very helpful to verify resin separation during backwash.

### THROUGHPUT CAPACITY (Gal/cu. ft.)

TDS (ppm as CaCO <sub>3</sub> ) Conductivity (uS/cm)	No CO <sub>2</sub> or SiO <sub>2</sub>	5 ppm CO <sub>2</sub> or SiO <sub>2</sub>	10 ppm CO <sub>2</sub> or SiO <sub>2</sub>
<b>2/5</b>	102,515	29,290	17,086
<b>5/12.5</b>	41,006	20,503	13,669
<b>10/25</b>	20,503	13,669	10,251
<b>20/50</b>	10,251	8,201	6,834
<b>50/125</b>	4,101	3,728	3,417
<b>100/250</b>	2,050	1,953	1,864
<b>200/500</b>	1,025	1,000	976
<b>500/1250</b>	410	406	402
<b>1,000/2500</b>	205	204	203

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<sub>3</sub>). Different salts may have different contributions to TDS. Capacity is based on the anion component and is for virgin resin. Following the initial exhaustion and regeneration subsequent cycles will likely be shorter, depending on how skillfully the resins are separated, regenerated, and remixed.

### IN PLACE REGENERATION

ResinTech MBD-15 is ideal for in place regenerated mixed beds, especially if they are set up for the 60/40 anion to cation ratio that is optimum for most mixed bed polishers.

### SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	140°F
Minimum bed depth	24 inches
Backwash expansion	50 to 100 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

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