

## MAGNA MBD-15-LTOC

MIXED BED

**HIGH CAPACITY  
LOW TOC MIXED BED  
POLYSTYRENIC GEL  
H / OH FORM**

ResinTech MBD-15-LTOC is a mixture of a dark-colored hydrogen form cation resin and a hydroxide form type 1 strong base anion resin. The resin ratio is 1:1 on an equivalent basis. The LTOC grade means it has been functionally tested to produce > 18 megohm resistivity and under 10 ppb of TOC. MBD-15-LTOC is intended for use in all mixed bed deionization applications that require high resistivity, high throughput capacity and low total organic carbon.

### APPLICATIONS

- High Purity DI Water
- Portable Exchange Deionization (PEDI) - Low TOC
- Cartridge Applications
- 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>                             | 140°F (60°C)                     |
| <b>Capacity (meq/mL)</b>                      | 0.6                              |
| <b>Moisture Retention</b>                     | 53% to 65%                       |
| <b>Shipping Weight</b>                        | 42 - 44 lbs/ft³ (673 - 705 g/L)  |
| <b>Color</b>                                  | Brown / Black & Amber            |
| <b>Regenerability</b>                         | Yes                              |

### PACKAGING OPTIONS

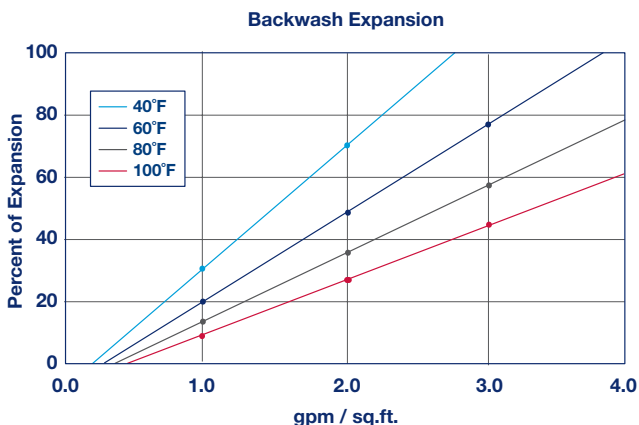
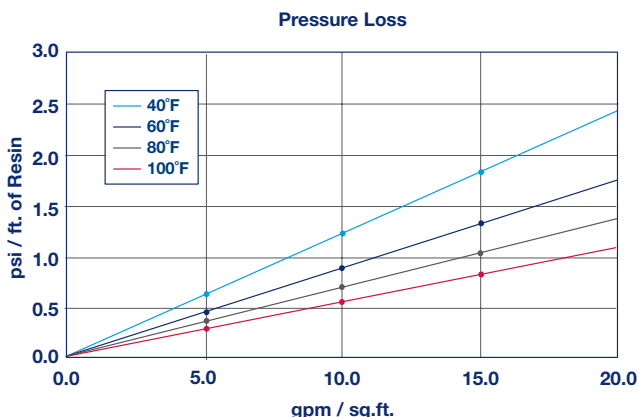
- 500 ml samples
- 1 ft³ bags
- 1 ft³ boxes
- 1 ft³ drums
- 7 ft³ drums
- 42 ft³ supersacks



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### SUGGESTED OPERATING CONDITIONS

|                                  |                         |
|----------------------------------|-------------------------|
| Maximum continuous temperature   | 140°F                   |
| Maximum intermittent temperature | 180°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

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

| TDS (ppm as CaO <sub>3</sub> )<br>Conductivity (uS/cm) | No CO <sub>2</sub> or SiO <sub>2</sub> | 5 ppm CO <sub>2</sub> or<br>SiO <sub>2</sub> | 10 ppm CO <sub>2</sub> or<br>SiO <sub>2</sub> |
|--------------------------------------------------------|----------------------------------------|----------------------------------------------|-----------------------------------------------|
| 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 to a 1 uS/cm endpoint. TDS is based on NaCl. Capacity is based on virgin resin.

### CATRIDGE USE

ResinTech MBD-15-LTOC premixed mixed bed is ideal for single use cartridge applications where the longest possible throughput capacity is desired.

### IN PLACE REGENERATION

ResinTech MBD-15-LTOC 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.

### PORTABLE EXCHANGE DEIONIZATION (PEDI)

ResinTech MBD-15-LTOC 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 for regeneration, and reused hundreds or thousands of times. The cation component is dark in color and provides optimized color difference from the anion. This color difference can verify resin separation during backwash.