

# PRODUCT SPECIFICATION SHEET

## MAGNA MBD-15-ULTRA

MIXED BED

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

ResinTech MBD-15-ULTRA 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 ULTRA grade means it has been functionally tested to produce > 18 megohm resistivity and under 2 ppb of TOC. MBD-15-ULTRA is intended for use in all mixed bed deionization applications that require high resistivity and high throughput capacity.

### APPLICATIONS

- Ultrapure Water Production (UPW)
- UPW System Polishing
- 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/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> bags
- 1 ft<sup>3</sup> boxes
- 1 ft<sup>3</sup> drums
- 7 ft<sup>3</sup> drums
- 42 ft<sup>3</sup> supersacks

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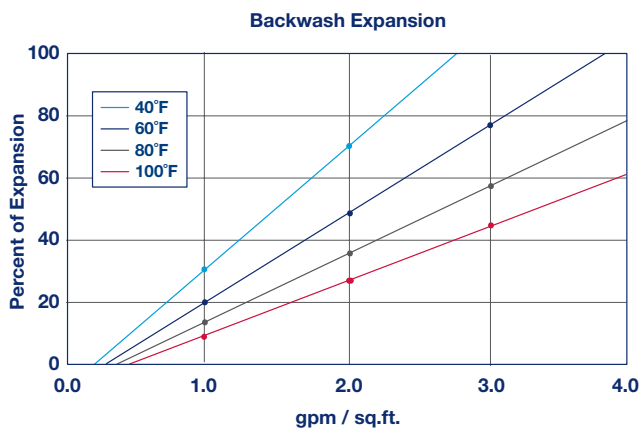
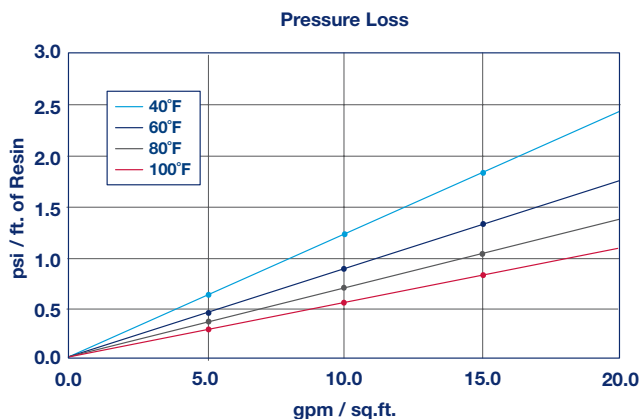


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### ULTRAPURE WATER

ResinTech MBD-15 ULTRA is a mixed bed ion exchange resin that has been optimized in every respect to produce the highest possible water quality. The cation and the anion components are very highly regenerated and then post-treated using a proprietary process to remove traces of TOC leachables and other undesirable contaminants. The use of black cation resin with uniform bead size along with a slightly smaller anion bead size, helps produce a sharp separation that is easy to see, greatly simplifying the regeneration process.

### MAXIMUM IMPURITIES

Metallic Impurities (moist basis)		
Sodium (Na) ppm		< 40
Iron (Fe) ppm		< 50
Copper (Cu) ppm		< 10
Aluminum (Al) ppm		< 30
Calcium (Ca) ppm		< 30
Magnesium (Mg) ppm		< 30
Heavy metals (Pb) ppm		< 10
Anionic Impurities		
Equivalent percent Chloride (% Cl)		< 0.2
Equivalent percent Sulfate (% SO <sub>4</sub> )		< 0.2
Equivalent percent Hydroxide (% OH)		> 95
Leachable TOC		
BV's rinse (at 0.5 BV/min)		(Max ppb TOC)
25		25
50		5
100		1

### 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

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