

## MAGNA MBD-NANO

MIXED BED

**ELECTRONICS GRADE  
ULTRA-HIGH PURITY MIXED BED  
H / OH FORM**

ResinTech MBD-NANO 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 NANO grade means it has been functionally tested to produce > 18 megohm resistivity and under 2 ppb of TOC. MBD-NANO is intended for use in E-1.1 water applications requiring TOC of no more than 2 ppb and metals certification.

### APPLICATIONS

- Cartridge Applications
- Portable Exchange Deionization (PEDI)
- High Temperature 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>	17%
<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>	0.55
<b>Moisture Retention</b>	53% to 62%
<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

Revision 1.0  
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**SUGGESTED OPERATING CONDITIONS**

Maximum continuous temperature	140°F
Maximum intermittent temperature	180°F
Minimum bed depth	24 inches
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

**MAXIMUM IMPURITIES**

MBD-NANO uses proprietary production techniques to ensure the lowest levels of inorganic cations and anions on the resin.

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 (total organic carbon)	
BV's rinse (at 0.5 BV/min)	(Max ppb TOC)
25	25
50	5
100	1

Lot certification is available and is provided when specified in purchase agreement.

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