

PRODUCT SPECIFICATION SHEET

MAGNA MBD-15-SC

MIXED BED

**SEMICONDUCTOR GRADE MIXED BED
HIGH PURITY & HIGH CAPACITY
POLYSTYRENIC GEL
H / OH FORM**

ResinTech MBD-15-SC 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 SC grade means it has been functionally tested to produce > 18 megohm resistivity and under 50 ppb of TOC. MBD-15-SC 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	140°F (60°C)
Capacity (meq/mL)	0.55
Moisture Retention	57% to 65%
Shipping Weight	42 - 44 lbs/ft ³ (673 - 705 g/L)
Color	Brown / Black & Amber
Regenerability	Yes

PACKAGING OPTIONS

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

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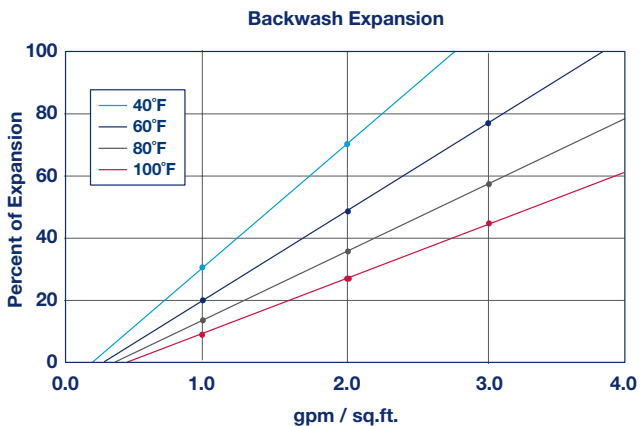
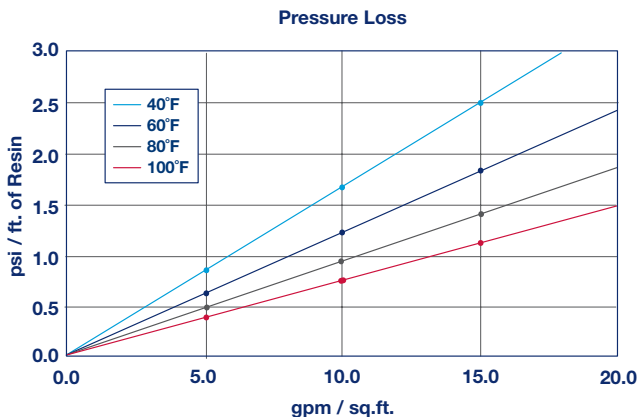


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PORTABLE EXCHANGE DEIONIZATION (PEDI)

ResinTech MBD-15-SC 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 can verify resin separation during backwash.

THROUGHPUT CAPACITY (Gal/cu. ft.)			
TDS (ppm as CaCO 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	102,515	29,290	17,086
5/12.5	41,006	20,503	13,669
10/25	20,503	13,669	10,251
20/50	10,251	8,201	6,834
50/125	4,101	3,728	3,417
100/250	2,050	1,953	1,864
200/500	1,025	1,000	976
500/1250	410	406	402
1,000/2500	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 CaCO₃). 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-SC 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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