

RESINTECH MBD-15 is a one-to-one equivalent mixture of CG8-H-BL (a hydrogen form strong acid cation resin) and SBG1P-OH (a hydroxide form type 1 porous strong base anion resin). *MBD-15* utilizes a dark colored cation resin and a light colored anion resin and is designed to produce very high water quality and to separate easily for regeneration. *RESINTECH MBD-15* is intended for use in all mixed bed deionization applications that require high resistivity and high capacity. *MBD-15* is particularly well suited for portable exchange and other polishing applications. *MBD-15* is supplied ready to use with the cation component in the hydrogen form and the anion component in the hydroxide form. Available in grades.

FEATURES & BENEFITS

- **HIGH TOTAL CAPACITY**

Cation and anion mixture provides high capacity for "in place" mixed bed installations

- **EASE OF SEPARATION**

Density and color difference between cation and anion components results in good backwash separation during regeneration

- **SUPERIOR ORGANIC FOULING RESISTANCE**

Highly porous anion component minimizes organic fouling

- **IDEAL FOR PORTABLE EXCHANGE DI SYSTEMS**

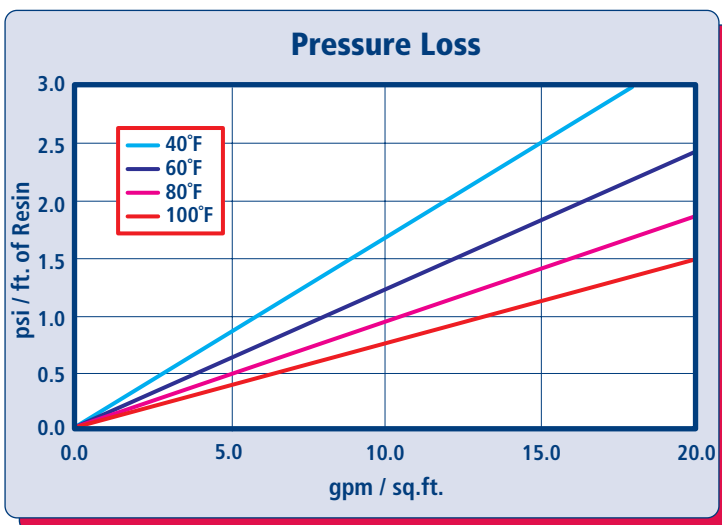
All resin parameters are optimized for use in portable exchange DI systems where the resin is regenerated at a central facility

- **COMPLIES WITH US FDA REGULATIONS**

Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the US FDA

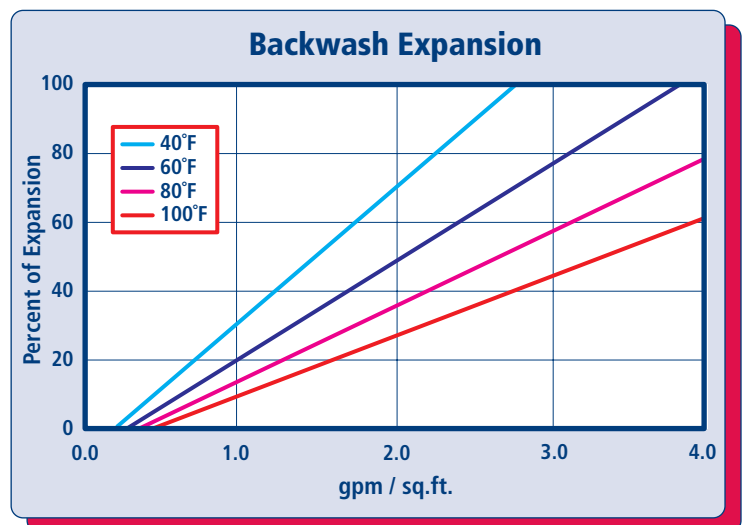
For applications requiring very high resistivity, 10 bed volumes of rinse should be passed through the resin prior to use.

HYDRAULIC PROPERTIES



PRESSURE LOSS

The graph above shows the expected pressure loss of ResinTech MBD-15 per foot of bed depth as a function of flow rate at various temperatures.



BACKWASH

The graph above shows the expansion characteristics of ResinTech MBD-15 as a function of flow rate at various temperatures.

RESINTECH® MBD-15

PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer type	Gel
Functional Group	
Cation component	Sulfonic acid
Anion component	Trimethylamine
Physical Form	Spherical beads
Ionic Form as shipped	Hydrogen/Hydroxide
Column Capacity	0.57 meq/mL
Volume ratio Cation/Anion	40/60 percent
Water Retention	60 to 65 percent
Approximate Shipping Weight	43 lbs per cu. ft.
Screen size distribution (U.S. Mesh)	16 to 50
Resin Color	
Cation component	Brown to black
Anion component	Amber

Note: Physical properties can be certified on a per lot basis, available upon request

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 Group

APPLICATIONS

MBD-15 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 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. The cation component, CG8-H-BL, has optimized bead size to separate cleanly from the anion component, SBG1P-OH.

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.

CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS. Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

MATERIAL SAFETY DATA SHEETS (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information. That information may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used. These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents; further we assume no liability for the consequences of any such actions.

RESINTECH is a registered trademark © of RESINTECH INC.

MBD-15 rev 1.4