

**MBD-30****MIXED BED RESIN
COLOR INDICATING
H/OH FORM**

RESINTeCH MBD-30 is a one-to-one volume mixture of CG8-H (a hydrogen form amber colored strong acid cation resin) and SBG1-OH-ID (a blue colored hydroxide form type 1 strong base anion resin). *MBD-30* utilizes a pH indicator dye in the anion component that changes color from deep blue to amber as the resin exhausts. *RESINTeCH MBD-30* is intended for use in applications where a color indication of resin exhaustion is desired. *MBD-30* is supplied ready to use with the cation component in the hydrogen form and the anion component in the hydroxide form.

FEATURES & BENEFITS

- **COLOR INDICATING RESIN**

Color changes from deep blue to amber as resin exhausts, providing a simple visual indication of depletion

- **DESIGNED FOR CARTRIDGE USE**

Optimized particle size and visual indication of exhaustion make the resin an ideal product for use in clear cartridge housings

- **HIGH TOTAL CAPACITY**

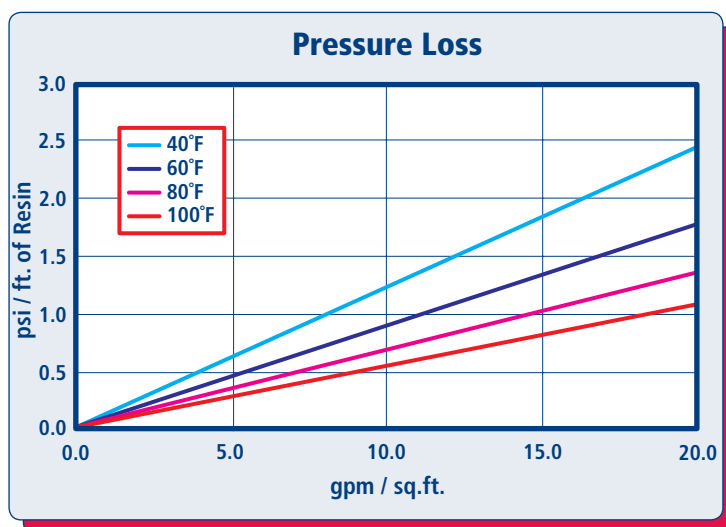
Provides long run lengths in single use applications

- **CONTROLLED PARTICLE SIZE**

16 to 50 mesh size provides a low pressure drop and superior kinetics

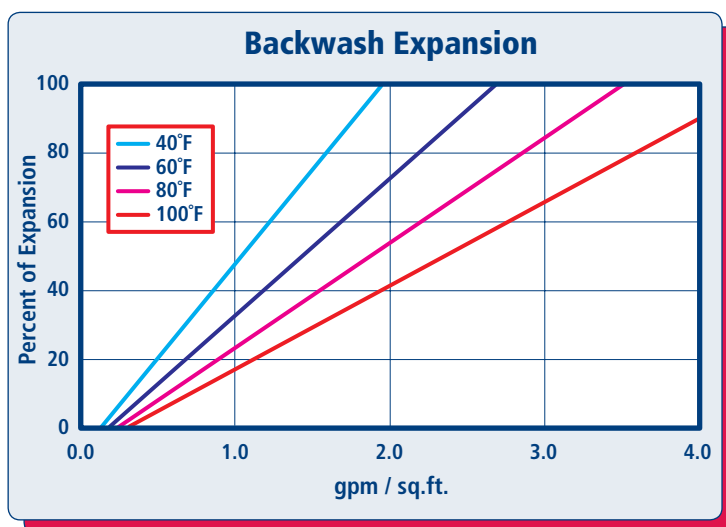
For applications requiring very high resistivity, 10 bed volumes of rinse should be passed through the resin prior to use.

HYDRAULIC PROPERTIES



PRESSURE LOSS

The graph above shows the expected pressure loss of *ResinTech MBD-30* 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-30* as a function of flow rate at various temperatures.

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	>0.3 meq/mL
Volume ratio Cation/Anion	1:1
Water Retention	52 to 62 percent
Approximate Shipping Weight	43 lbs per cu. ft.
Screen size distribution (U.S. Mesh)	16 to 50
Resin Color	
Cation component	Amber
Anion component	Blue

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	1 to 5 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

APPLICATIONS

MBD-30 Throughput Capacity			
TDS	Gal/cu. ft. (no CO ₂ or SiO ₂)	Gal/cu. ft. (5 ppm CO ₂ or SiO ₂)	Gal/cu. ft. (10 ppm CO ₂ or SiO ₂)
2	93,195	26,627	15,533
5	37,278	18,639	12,426
10	18,639	12,426	9,320
20	9,320	7,456	6,213
50	3,728	3,389	3,107
100	1,864	1,775	1,694
200	932	909	888
500	373	369	365
1,000	186	185	185

Mixed bed throughput capacity is based on the stated inlet conductivity of neutral pH waters and run to a 1 uS/cm endpoint. Capacity is for virgin resin. Following the initial exhaustion and regeneration, subsequent cycles will likely be shorter, depending on how well the resins are separated, regenerated, and remixed. No engineering downgrade has been applied.

CARTRIDGE USE

RESINTECH MBD-30 premixed mixed bed resin is ideal for single use cartridge applications where visual indication of exhaustion is desired. The anion component of MBD-30 is dyed dark blue and turns amber in color as the resin exhausts. The ratio of anion to cation resin is optimized to provide balanced exchange of both cations and anions and to ensure the resin changes color as it exhausts.

AQUARIUM USE

RESINTECH MBD-30 is ideal for aquarium applications where a color change is useful to indicate resin exhaustion. The anion component is dyed dark blue and turns amber as the anion resin exhausts. The mixture is specially formulated so that the color change is sharp and easy to see. The dye used in MBD-30 is non-hazardous, is permanently absorbed by the resin and does not come out.

STEAM IRON USE

RESINTECH MBD-30 can be used in clear cartridges or pouches for steam iron and other miscellaneous uses of deionized water. The mixture remains active even when fluidized and effectively removes hardness and other salts from the water so that scale does not form on heating surfaces during use. The color changing anion component remains blue until the resin is spent, then turns from blue to amber, indicating the need to replace the resin.



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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.

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