

RESINTECH WBMP is a styrenic macroporous weak base anion resin with moderate strong base functionality. *WBMP* is a weak base anion resin with very good rinse characteristics that can be efficiently regenerated with a variety of alkaline chemicals, or with waste caustic left over from regeneration of strong base anion resin. *RESINTECH WBMP* is intended for use in multibed demineralizers. It can also be used in resource recovery systems and for selective ion removal (when used in the acid salt form). *WBMP* is supplied in the free base form, or can be special ordered in the acid salt form (when ordered as *WBMP-HCl*), or with the strong base sites regenerated into the hydroxide form (when ordered as *WBMP-OH*).

FEATURES & BENEFITS

- **HIGH OPERATING CAPACITY**

Tertiary amine functionality provides nearly 100% caustic regeneration efficiency

- **RESISTANT TO ORGANIC FOULING**

Able to reversibly adsorb naturally occurring organic substances when used in demineralization systems

- **SUPERIOR PHYSICAL STABILITY**

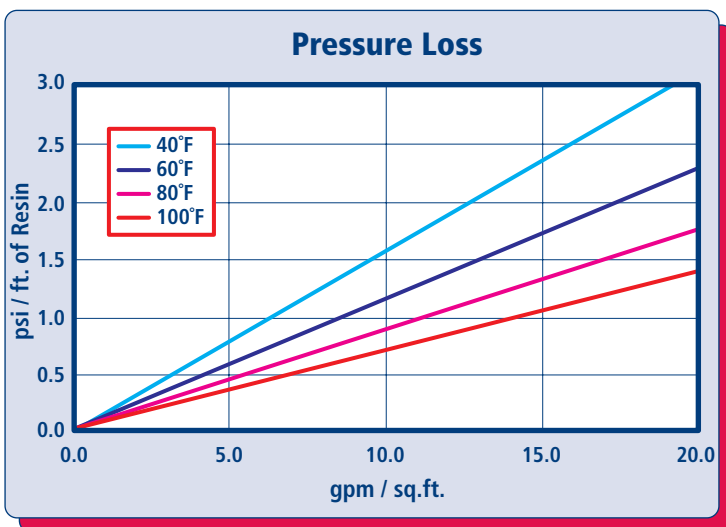
95% plus sphericity and high crush strengths together with carefully controlled particle distribution provides long life and low pressure drop

- **COMPLIES WITH US FDA REGULATIONS**

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

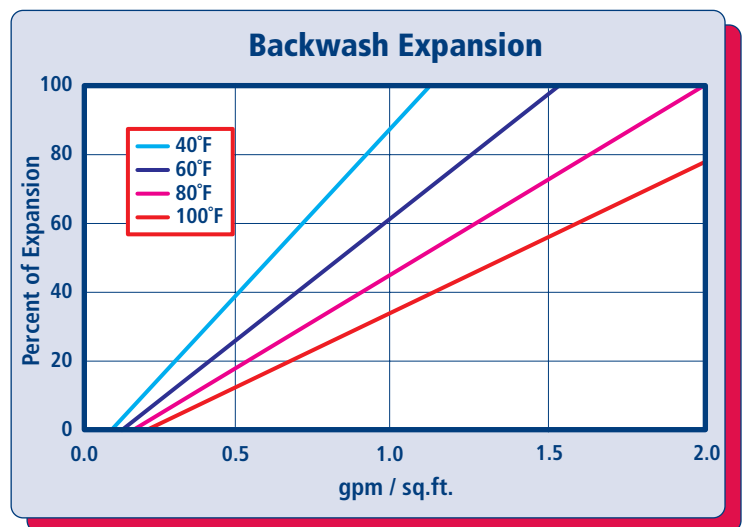
Prior to first use for potable water, resin should be backwashed for a minimum of 20 minutes, followed by 10 bed volumes of downflow rinse.

HYDRAULIC PROPERTIES



PRESSURE LOSS

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



BACKWASH

The graph above shows the expansion characteristics of *ResinTech WBMP* as a function of flow rate at various temperatures.

PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer Type	Macroporous
Functional Group	Dimethylamine
Physical Form	Spherical beads
Ionic Form as shipped	Free Base
Total Capacity	
Free Base form	>1.3 meq/mL
Water Retention	
Free Base form	53 to 60 percent
Approximate Shipping Weight	
Free base form	40 lbs./cu.ft.
Swelling, Free Base to Cl	15 to 25 percent
Screen Size Distribution (U.S. mesh)	16 to 50
Maximum Fines Content (<50 mesh)	1 percent
Minimum Sphericity	95 percent
Uniformity Coefficient	1.6 approx.
Resin Color	White to tan

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

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
Free Base form	212°F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	20 psi
Operating pH range	<9 SU
Regenerant Concentration	
Hydroxide cycle	1 to 6 percent NaOH
Regenerant level	3 to 6 lbs./cu.ft.
Regenerant flow rate.	0.5 to 1.0 gpm/cu.ft.
Regenerant contact time	>30 minutes
Displacement flow rate	Same as dilution water
Displacement volume	10 to 15 gallons/cu.ft.
Rinse flow rate	Same as service flow
Rinse volume	35 to 60 gallons/cu.ft.
Service flow rate	1 to 4 gpm/cu.ft.

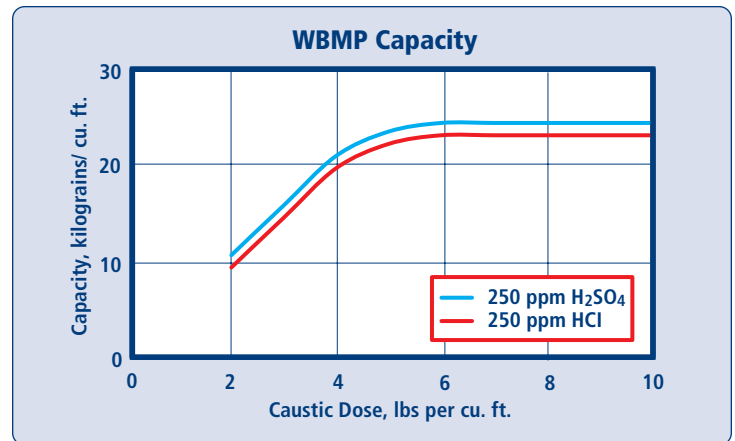
Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.

For operation outside these guidelines, contact ResinTech Technical Support

APPLICATIONS

DEMINEALIZER

RESINTECH WBMP can be used in a two bed system following a strong acid cation unit (such as CG8-H) where weakly acidic anions such as silica and carbon dioxide do not have to be completely removed. Where complete removal of all anions is required, WBMP can be placed ahead of a strong base anion unit (such as SBG1P-OH). WBMP will efficiently remove strong acids such as chlorides, sulfates and nitrates, leaving silica and carbon dioxide to be removed by the strong base resin. WBMP is easily regenerated with modest caustic dosages or with waste caustic left over from the strong base anion unit.



Weak base resins are temperature and flow sensitive. The chart is based on 2 gpm/cu. ft. flow rate, temperature of 70°F, a bed depth of 30 inches, and an endpoint of 20 kilohms resistivity (50 uS/cm). No engineering downgrade has been applied.

ORGANIC REMOVAL

RESINTECH WBMP is easily regenerated with sodium hydroxide, allowing the removal of organic acid anions as part of demineralization process utilizing an upstream hydrogen form strong acid cation exchanger. The use of WBMP in front of a hydroxide form strong base anion exchanger can help reduce organic fouling of the strong base anion resin, increasing run lengths between regenerations and reducing the rinse volume required before return to service. Because free base form weak base anion resins are only able to absorb acids, the feedwater must be significantly acidic or the resin must be preconverted into the acid sulfate or acid chloride form prior to use.