

RESINTECH WBACR is an acrylic gel weak base anion resin. *WBACR* has exceptionally high capacity weak base resin with almost no strong base functionality. *RESINTECH WBACR* is intended for use in single cycle exhaustions such as cartridges, waste treatment applications, systems where release of hydroxides is problematic, and systems that can accommodate a relatively long rinse requirement. *WBACR* is supplied in the free base form.

FEATURES & BENEFITS

- **HIGH BASICITY**

High internal basicity produces a higher effluent pH over a greater fraction of the exhaustion cycle

- **HIGH OPERATING CAPACITY**

Tertiary amine functionality provides nearly 100% caustic regeneration efficiency

- **SUPERIOR PHYSICAL STABILITY**

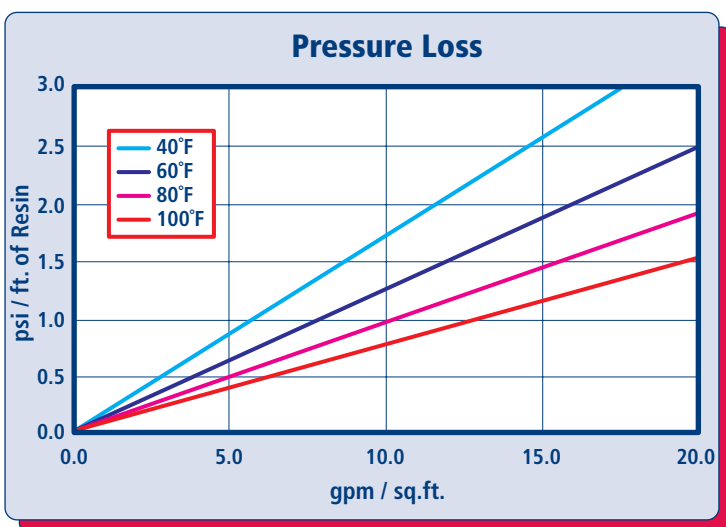
93% plus sphericity and high crush strengths together with carefully controlled particle distribution provides long life and low pressure drop

- **CONTROLLED PARTICLE SIZE**

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

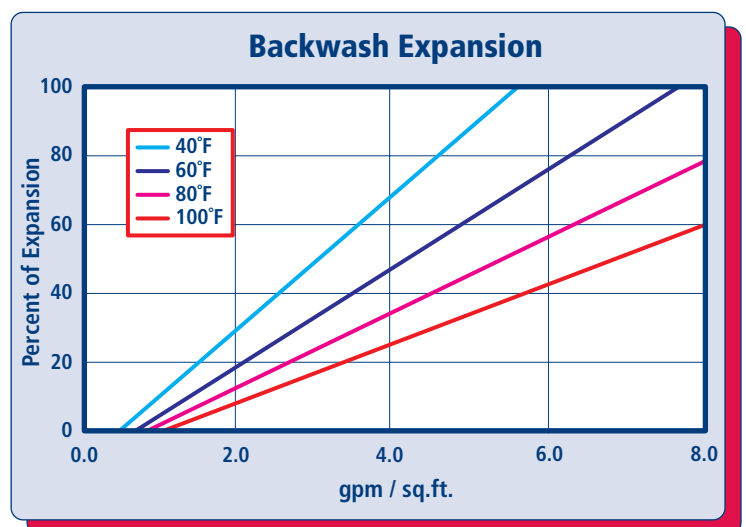
Prior to first use, resin should be backwashed for a minimum of 20 minutes, followed by 10 bed volumes of downflow rinse.

HYDRAULIC PROPERTIES



PRESSURE LOSS

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



BACKWASH

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

PHYSICAL PROPERTIES

Polymer Structure	Acrylic/DVB
Polymer Type	Gel
Functional Group	Tertiary Amine
Physical Form	Spherical beads
Ionic Form as shipped	Free Base
Total Capacity	
Free Base form	>1.6 meq/mL
Water Retention	
Free Base form	55 to 63 percent
Approximate Shipping Weight	
Free Base form	45 lbs./cu.ft.
Swelling, Free Base to Cl	10 to 15 percent
Screen Size Distribution (U.S. mesh)	16 to 50
Maximum Fines Content (<50 mesh)	1 percent
Minimum Sphericity	93 percent
Uniformity Coefficient	1.6 approx.
Resin Color	Off white

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.

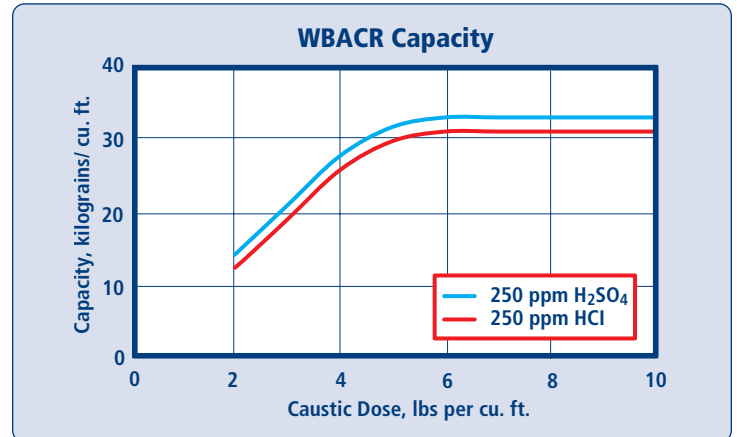
Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.

For operation outside these guidelines, contact ResinTech Technical Support

APPLICATIONS

DEMINEALIZER

RESINTECH WBACR 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, WBACR can be placed ahead of a strong base anion unit (such as SBG1P-OH). WBACR will efficiently remove strong acids such as chlorides, sulfates and nitrates, leaving silica and carbon dioxide to be removed by the strong base resin. WBACR 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 WBACR is easily regenerated with sodium hydroxide, allowing the removal of organic acid anions as part of a demineralization process utilizing an upstream hydrogen form strong acid cation exchanger. The use of WBACR 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. 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.

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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