

SPECIALTY RESIN



PROBLEND™ NUCLEAR GRADE HIGH EFFICIENCY MIXED-BED RESIN

ProBlend NG-HE (P/N ER30001) — We took our ProSoft™ Premium softening resin and our ProSelect™ General Purpose anion exchange resin and mixed them together to make one of the highest capacity bulk demineralizers available. ProBlend Nuclear Grade High Efficiency mixed-bed resin is specially suited for optimum performance and low cost regeneration. It is simply the best value for the dollar.

FEATURES

- Complies with USDA & FDA regulations (paragraph 21 CFR173.25) for potable water applications *
- Designed for Portable Exchange DI (PEDI) use
- Highest operating capacity and low odor
- Superior organic fouling resistance
- Performance tested

* For potable water applications, the resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to insure compliance with extractable levels.

Suggested Operating Conditions

Maximum Temperature	
Non-regenerable *	140°F (60°C)
Regenerable	95°F (35°C)
Operating Flow Rate (Typical)	2 to 10 gpm/cu.ft.
pH Range	0 to 14
Backwash Rate (See next page)	
50% Bed Expansion @ 60°F	3.3 gpm/sq.ft.
Pressure Drop	See next page
Percent Conversions to Ionic Form	
Cation H	99% minimum
Anion OH	90% minimum **
Anion Cl + SO ₄	10% maximum
Anion CO ₃	** (See note below)

Physical Properties

Functional Structure

Cation	RSO ₃ ⁻ H ⁺ (Hydrogen form sulfonated polystyrene copolymer)
Anion	R ₄ N ⁺ OH ⁻ (Hydroxyl form Type 2 strong base alkyl quarternary ammonium polystyrene copolymer)

Ionic Form, as shipped	H/OH
Physical Form	Spherical beads
Screen Size Distribution	
+16 mesh (U.S. Std.)	5% maximum
-50 mesh (U.S. Std.)	2% maximum
Moisture Content	50% maximum
Volume Ratio (as shipped)	
Cation/Anion	42/58
Total Capacity	
Cation (Na ⁺ form)	1.95 meq/ml minimum
Anion (Cl ⁻ form)	1.45 meq/ml minimum
Approximate Shipping Weight	44 lb/cu.ft. (720g/l)
Standard Packaging	5 or 7 cu.ft. plastic lined fiber drums

First Cycle Operating Capacity

0.65 meq/mL (14.0 Kgrs/cu.ft.) minimum to electrolyte breakthrough. Regenerable capacity first two months in service is approximately 0.6 meq/mL.

Effluent Quality

Greater than 15 megohm on properly pretreated tap water, free of oxidizing agents and suspended matter.

* 6 month typical resin life at 175°F (80°C).

** Hydroxides and CO₃ levels measured immediately after production and may change during storage and shipment due to adsorption of CO₂ from the atmosphere.

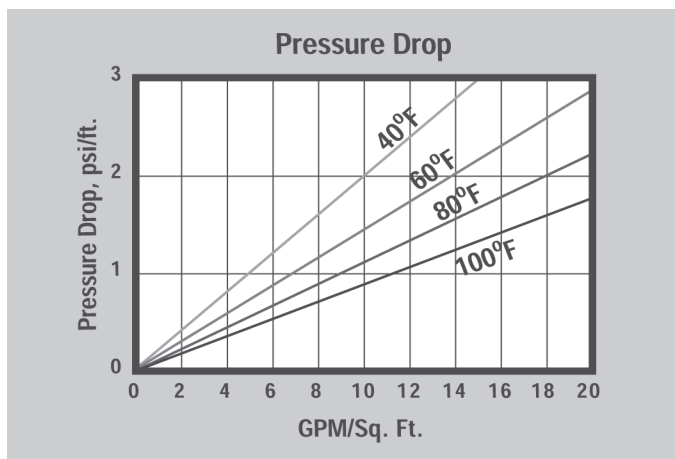
CAUTION: DO NOT MIX ION EXCHANGE RESINS WITH STRONG OXIDIZING AGENTS. Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials such as ion exchange resins.

Note: These suggestions and data are based on information we believe to be reliable. However, we do not make any guarantee or warranty. We caution against using these products in any unsafe manner or in violation of any patents. Further, we assume no liability for the consequences of any such actions.

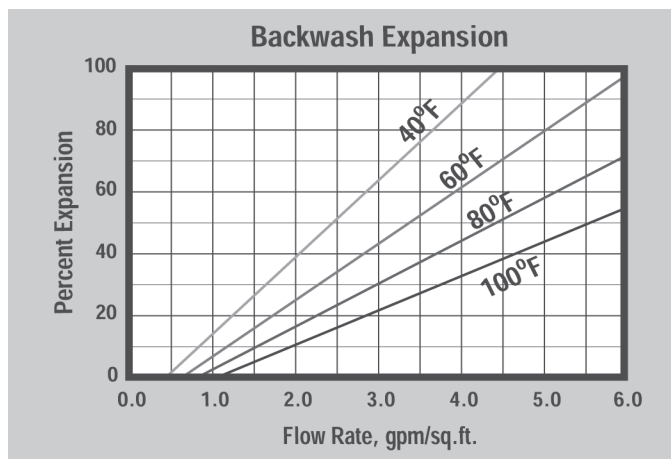
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PRESSURE DROP — The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various temperatures.



BACKWASH — The backwash step is used to separate the components prior to regeneration and to remove particles. The separation is optimized at a bed expansion of 50 to 75 percent.