

# A4000

## Strong acid cation softening resin

**A4000** is a high purity, premium grade, pretreated, strongly acidic gel-type cation exchange resin specially designed for residential drinking water treatment. The A4000 is a bead type, crosslinked, polystyrene divinylbenzene resin that offers excellent bead integrity and very low extractables. The product is highly suitable for a wide variety of drinking water treatment applications. **A4000** has a light amber color and is specially pretreated to remove taste, odor and color throw. **A4000** meets the requirements of FDA regulation CFR section 21, §173.25.

### Typical Properties

Type	Crosslinked polystyrene divinylbenzene
Form	Gel-type, amber, spherical beads
Functional group	Sulfonic acid
Whole bead count	93% min.
Ionic form, as shipped	Na <sup>+</sup>
Bead size	16x40 US mesh (0.42-1.25 mm)
Effective size	0.45 ± 0.07 mm
Bulk density	52 lb/ft <sup>3</sup> (840 kg/m <sup>3</sup> )
Real density	1.28 g/cm <sup>3</sup>
Water retention	45-48%
Total capacity	1.90 eq/l min.
Volume change Ca <sup>2+</sup> → Na <sup>+</sup>	8% max.
Stability, temperature	250°F (120°C) max.
Stability, pH	0-14
Color throw	25 APHA max.

### Standard Design Conditions

Bed depth	>30 in (750 mm)
Service flow rate	2-5 gpm/ft <sup>3</sup> (16-40 l/h/l)
Backwash expansion	50-75%
NaCl concentration for regeneration	8-15%
Regeneration level	80-300 g/l
NaCl flow rate for regeneration	0.25-0.50 gpm/ft <sup>3</sup> (2-4 l/h/l)
Rinse rate (slow)	1-3 bed volumes at regeneration flow rate
Rinse rate (fast)	3-6 bed volumes at service flow rate
Turbidity	<5.0 NTU
Free chlorine	<1 ppm

### Key Features and Benefits

- **Pretreated and Rinsed**  
Guarantees minimal color throw and eliminates taste and odor
- **High Integrity Beads**  
Excellent resistance to mechanical degradation ensures low pressure drop
- **Low Extractables – FDA Compliance**  
Specially treated to eliminate leaching of organic matter, assuring compliance with FDA regulation CFR section 21, §173.25.

### Typical Applications

- Residential softening
- Industrial softening
- Municipal softening

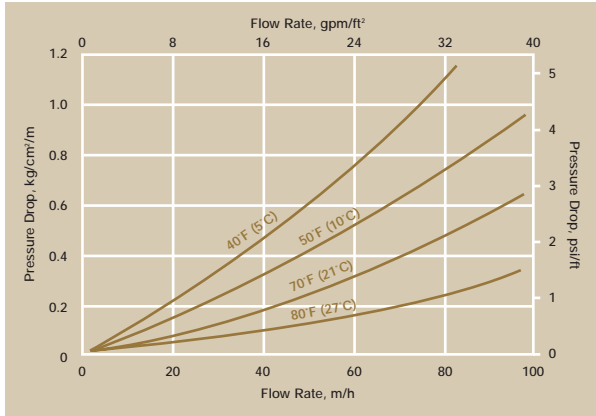
### Standard Packaging

- 1 cu.ft. (28 l) PE valve bags
- 40 cu.ft. (1132 l) super sacks

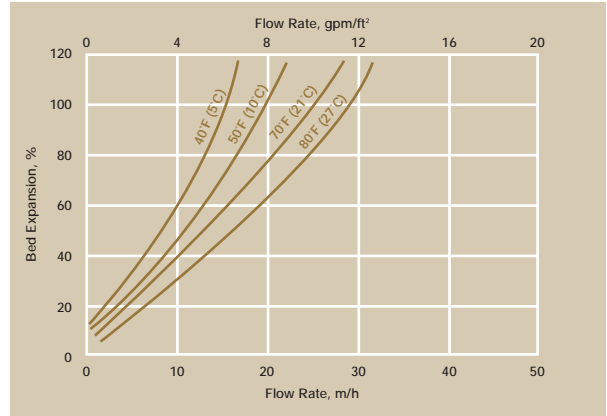
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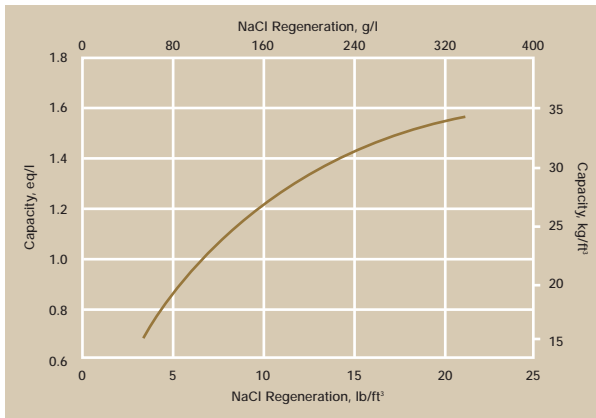
## Pressure Drop



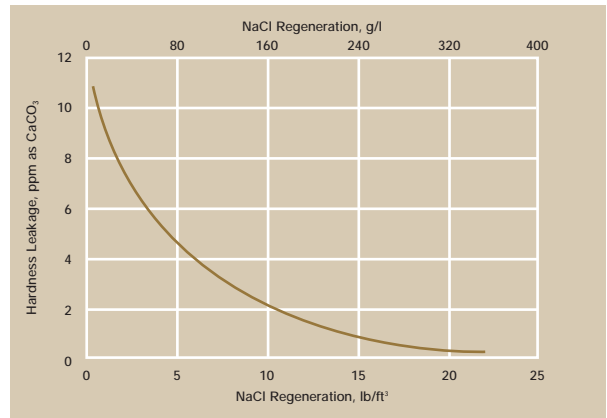
## Backwash Expansion



## Capacity Information



## Hardness Leakage Information



Capacity and Hardness Leakage graphs are shown assuming a service flow of 4 gpm/ft<sup>2</sup> (32 l/h/l) and total dissolved solids of 400 ppm and 20 grains of total hardness. The capacity and hardness leakage will increase with increasing total dissolved solids and total hardness.

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