

Macroporous Type I Strong Base Anion Exchange Resin

Purofine PFA500 is a macroporous poly(vinylbenzyl-trimethylammonium) type I strong base anion exchange resin which because of its regeneration efficiency has particularly high operating capacity at lower or even moderate regeneration levels. It has superior kinetic properties and is also relatively less susceptible to organic fouling than are standard macroporous type strong base anion resins. Consequently higher purity treated water (or other solution) can generally be obtained. These useful advantages are obtained by way of the narrow particle size distribution. Purofine PFA500 shows enhanced resistance to osmotic and thermal shock and good reversible sorptive capacity for the complex organic materials, both ionised and un-ionized, which occur in many surface water supplies. Its resistance to fouling is superior to that of both gel resins and many other typical standard macroporous resins. Excellent results may be obtained with this resin in most of the usual ion-exchange column configurations. In conventional two-stage deionizing plants, its silica-removal properties are superior to those of most premium strong-base anion exchange resins. With influent solutions containing relatively high proportions of bicarbonate and sulphate, working capacities as high as 80% of the total exchange capacity can be achieved.

Basic Features:

Application	Fast Regeneration Efficient Demineralization - Uniformly Sized
Polymer Structure	Macroporous polystyrene crosslinked with divinylbenzene
Appearance	Spherical beads
Functional Group	Type 1 Quaternary Ammonium
Ionic form as shipped	Cl ⁻

Typical Physical and Chemical Characteristics:

Total Capacity (min.)	Cl ⁻	1.15 eq/l
Total Capacity (min.)	Cl ⁻	25.11 kGr/ft ³
Moisture Retention	Cl ⁻	53-58 %
Mean Size Typical		0.52-0.62 mm
Uniformity Coefficient (max.)		1.20
Reversible Swelling (max.)	Cl ⁻ → OH ⁻	15 %
Specific Gravity		1.08 g/ml
Shipping Weight (approx.)		670-690 g/l
Temp Limit	OH ⁻	65 °C
Temp Limit	OH ⁻	150 °F
Temp Limit	Cl ⁻	100 °C
Temp Limit	Cl ⁻	212 °F

pH Limits		0-14 (Stability)
pH Limits	H ⁺	0-11 (Operating)

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