

Macroporous Type I Strong Base Anion Exchange Resin

Purofine PFA500S 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 low or even moderate regeneration levels.

It has superior kinetic properties and is relatively less susceptible to organic fouling than standard macroporous type strong base anion resins. Consequently, higher purity treated water or syrups can generally be obtained. These useful advantages are obtained by way of the narrow particle size distribution.

Purofine PFA500S shows enhanced resistance to osmotic and thermal shock and good reversible sorptive capacity for the complex organic materials, both ionized and non-ionized, which occur in many surface water supplies. Its resistance to fouling is superior to that of both gel resins and many 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 demineralization 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 | Sugar Grade Resin - 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 ⁻ | 25.10 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 % |

USA
Telephone: (1) 610-668-9090
Fax: (1) 610-668-8139
Email: info@puroliteusa.com

Europe
Telephone: +44 1443 229334
Fax: +44 1443 227073
Email: sales@purolite.com

Asia Pacific
Telephone: +86 571 876 31385
Fax: +86 571 876 31385
Email: pultalan@purolitechina.com

| | | |
|---------------------------|-----------------|--------------------|
| 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) |

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Europe

Telephone: +44 1443 229334

Fax: +44 1443 227073

Email: sales@purolite.com

Asia Pacific

Telephone: +86 571 876 31385

Fax: +86 571 876 31385

Email: pultalan@purolitechina.com