

Gel Type I Strong Base Anion Exchange Resin

Purolite A420S is a porous gel poly(vinylbenzyl-trimethylammonium) exchanger developed for use in the removal of organics of high molecular weight including decolorization of a variety of solutions including cane sugar. Its comparatively low degree of substitution, combined with a relatively low crosslinker content, enables it to be used under conditions of osmotic stress detrimental to most conventional gel strong-base resins, while still retaining a high sorptive capacity for the complex color bodies. It may be used in the chloride form, and regenerated with (e.g.) 10% sodium chloride solution, preferably containing a small amount of sodium hydroxide. This alkaline brine promotes the regeneration efficiency, and also acts to prevent development of acidity in the treated solution.

Basic Features:

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| Application | Reversible Uptake of Large Organic Molecules - Sugar Syrups |
| Polymer Structure | Gel polystyrene crosslinked with divinylbenzene |
| Appearance | Spherical beads |
| Functional Group | Type 1 Quaternary Ammonium |
| Ionic form as shipped | Cl ⁻ |

Typical Physical and Chemical Characteristics:

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|-------------------------------|-----------------------------------|-------------------------------|
| Total Capacity (min.) | Cl ⁻ | 0.80 eq/l |
| Total Capacity (min.) | Cl ⁻ | 17.47 kGr/ft ³ |
| Moisture Retention | Cl ⁻ | 60-65 % |
| Mean Size Typical | | 0.65-0.90 mm |
| Uniformity Coefficient (max.) | | 1.70 |
| Reversible Swelling (max.) | Cl ⁻ → OH ⁻ | 20 % |
| Specific Gravity | | 1.07 g/ml |
| Shipping Weight (approx.) | | 675-705 g/l |
| Shipping Weight (approx.) | | 42.2-44.1 lbs/ft ³ |
| Temp Limit | OH ⁻ | 60 °C |
| Temp Limit | OH ⁻ | 140 °F |
| Temp Limit | Cl ⁻ | 100 °C |
| Temp Limit | Cl ⁻ | 212 °F |
| pH Limits | | 0-14 (Stability) |
| pH Limits | Cl ⁻ | 6-9 (Operating) |

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