

Gel Type II Strong Base Anion Exchange Resin

Purolite A200DL is a strong-base anion exchanger with both excellent operating capacity and good kinetics even when regenerant levels are comparatively low. It is especially designed to be used in a layered bed in conjunction with Purolite A100DL in a single vessel. The specially tailored particle size ranges of both resins together with their density differences are designed to maintain separate resin layers at all times. The combination of resins with both strong and weak functionality offers removal of both mineral acids (by the weakly functional resin) and silica plus bicarbonates (by the strongly functional resin). Minimal quantities of caustic soda are required because of the excellent regeneration efficiency of the weakly functional resin. Regeneration up-flow first contacts the strongly functional resin. This contact with high purity regenerant affords excellent removal of the weakly functional anions together with those mineral acids allowed to over-run the weakly basic resin. When the regenerant contacts the top layer of weakly functional resin it is partially exhausted. However, it is not necessary to have pure regenerant to achieve an efficient regeneration of the weakly functional resin. Thus the DOUBLITE SYSTEM offers excellent treated water quality combined with most efficient use of regenerant. Purolite A200DL has exceptional physical stability for a conventional gel-type resin which permits a long life without the development of excessive pressure drop; it also shows good kinetics of exchange. In a conventional deionizing plant, its silica-removal properties are comparable with those of any premium Type-II strong-base anion exchanger; however, as with other resins of this type, a polishing mixed-bed is necessary to ensure the lowest levels of residual silica. Like all type-II resins, it is not recommended to expose the hydroxide form of the resin to temperatures above 40° C. This results in gradual loss of strong base functionality.

Basic Features:

Application	Demineralization - Layered Bed
Polymer Structure	Gel polystyrene crosslinked with divinylbenzene
Appearance	Spherical beads
Functional Group	Type 2 Quaternary Ammonium
Ionic form as shipped	Cl ⁻

Typical Physical and Chemical Characteristics:

Total Capacity (min.)	Cl ⁻	1.30 eq/l
Total Capacity (min.)	Cl ⁻	28.38 kGr/ft ³
Moisture Retention	Cl ⁻	45-51 %
Mean Size Typical		0.85-1.00 mm
Uniformity Coefficient (max.)		1.40
Reversible Swelling (max.)	Cl ⁻ → OH ⁻	15 %

Specific Gravity		1.08 g/ml
Shipping Weight (approx.)		680-700 g/l
Shipping Weight (approx.)		42.5-43.8 lbs/ft ³
Temp Limit	OH ⁻	35 °C
Temp Limit	OH ⁻	104 °F
Temp Limit	Cl ⁻	85 °C
Temp Limit	Cl ⁻	185 °F
pH Limits		0-14 (Stability)
pH Limits	OH ⁻	1-10 (Operating)

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