PUROLITE
ION EXCHANGE RESINS

MAR 2000

A-400

Strong-Base Type I (Clear Gel) Anion Exchange Resin
(FOR EFFICIENT DEMINERALISATION INCLUDING SILICA REMOVAL)

Technical Data

PRODUCT DESCRIPTION

Purolite A-400 is a strong-base anion exchanger with both high operating capacity and the ability to achieve low residual silica levels. Minimal quantities of caustic soda are required compared with those typical of the classical Type I (**Purolite A-600**) quaternary ammonium structure based on polystyrene. It has a clear gel structure, showing excellent regeneration efficiency and rinse characteristics. **Purolite A-400** functions well both in mixed bed (**MIXLITE**) and layered bed (**DOUBLITE**) demineralizer systems, where specially tailored particle size ranges result in achieving or maintaining good separations. **Purolite A-400** 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, enabling very low concentration levels of both strong and weak acid anions to be achieved at practical flowrates .

Typical Chemical and Physical Characteristics

Polymer Structure	**Gel polystyrene crosslinked with divinylbenzene**
Appearance	**Spherical beads**
Functional Group	**Type I Quaternary Ammonium**
Ionic Form - as shipped	**Chloride - Cl^-**
Total Capacity (Cl^- Form)	**1.3 eq/l min**
Moisture Retention (Cl^- Form)	**48-54%**
Bead Size Range (microns)	**+1200 <5 %, 300 <1%**
Screen Size Range (U.S. Standard Screen)	**16-50 mesh, wet**
Reversible Swelling ($Cl^- \rightarrow OH^-$)	**20% max**
Specific Gravity (Cl^- Form)	**1.08**
Shipping Weight	**680-715 kg/m^3 (42.5-44.5 lb/ft^3)**
Temperature Limit	**(Cl^- Form) 100°C (212°F)**
	(OH^- Form) 60°C (140°F)
pH Limits (Stability, OH^- Form)	**0-14**
(Operating, OH^- Form)	**1-10**