

Macroporous Strong Base Anion Exchange Resin

Purolite A520E is a macroporous strong base anion resin which is specially designed for the removal of nitrates from water for potable processes. The macroporous matrix and special ion exchange group functionality imparts ideal nitrate selectivity to Purolite A520E making this resin particularly suitable for nitrate removal even when moderate to high concentrations of sulphate are present. Hence this resin gives superior performance in nitrate removal applications when compared with standard exchange resins. A requirement of the nitrate removal process is to produce potable water meeting the quality standard defined by the European Economic Community in the Directive No. 80/778 of July 1980. This directive limits the nitrates to a maximum admissible concentration (M.A.C.) of 50 mg NO₃/l. The U.S.A. drinking water regulations limit nitrates to 45 mg NO₃/l.

Basic Features:

Application	Nitrate Removal
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 ⁻	0.90 eq/l
Total Capacity (min.)	Cl ⁻	19.65 kGr/ft ³
Moisture Retention	Cl ⁻	50-56 %
Mean Size Typical		0.60-0.85 mm
Uniformity Coefficient (max.)		1.70
Specific Gravity		1.07 g/ml
Shipping Weight (approx.)		675-705 g/l
Temp Limit	Cl ⁻	100 °C
Temp Limit	Cl ⁻	212 °F
pH Limits		0-14 (Stability)
pH Limits	Cl ⁻	4.5-8.5 (Operating)