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Media:

A-520E Macroporous Strong Base Anion Exchange Resin

Product Description

Purolite A-520E 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 A-520E, making this resin particularly suitable for nitrate removal even when moderate to high concentrations of sulfate 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 NO_3/l. The USA drinking water regulations limit nitrates to 45 mg NO_3/l.

Regeneration

Sodium chloride is generally preferred for regeneration for reasons of cost and efficiency. When available, sea water can be used quite effectively. The use of softened water for make up of regenerant and rinse is often recommended to avoid the precipitation of calcium carbonate in and around the Purolite A-520E (or any other resin used in this application). Although the precipitation is not particularly detrimental in the short term, the long term effects may include increased resin attrition and leakage of nitrates.

Preconditioning Procedure

Purolite A-520E is processed to ensure that it meets the requirements for use in the treatment of potable water. On installation, it is recommended that the resin be regenerated with two bed volumes of 6% NaCl followed by a rinse of four bed volumes of potable water, prior to use.

Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Macroporous Styrene-Divinylbenzene
Physical Form and Appearance	Opaque Cream Spherical Beads
Whole Bead Count	95% minimum
Functional Groups	Quaternary Ammonium
Ionic Form, as shipped	Cl^-
Shipping Weight (approx)	680 g/l (42.5 lb/ft^3)
Screen Size Range:	
US Standard Screen	16 - 50 mesh, wet
Particle Size Range	+1200 mm <5%, -300 mm <1%
Moisture Retention, Cl^- Form	50 - 56%
Reversible Swelling Cl^-/SO_4/NO_3	negligible
Total Exchange Capacity, Cl^- Form:	
Wet, volumetric	0.9 meq/ml minimum
Dry, weight	2.8 meq/g minimum
Operating Temperature, Cl^- Form	100°C (212°F) maximum
pH Range, Stability	0 - 14
pH Range, Operating	4.5 - 8.5

A-520E is manufactured by: Purolite Company (The) - Bala Cynwyd, PA

For complete specifications, please contact our Customer Service Department

PUROLITE® ION EXCHANGE RESINS