

Macroporous Weak Acid Cation Exchange Resin

Purolite C107E is a high purity, high capacity polyacrylic weak-acid cation exchanger developed to treat water for potable use. It has particularly fast kinetics combined with the high capacity. The functional groups of the carboxylic type give high chemical efficiency in many applications, especially for the removal of bicarbonate alkalinity in water treatment, showing excellent uptake of alkaline earth metals in a relatively short contact time for this type of resin. Its major use is in the dealkalization and softening of waters. The treatment produces carbon dioxide from the bicarbonates in the feed supply. This imparts a pleasant taste to the treated water, while at the same time achieving hardness reduction and a lower pH which largely eliminates the potential for scum or scale formation when using the water for domestic purposes or in the processing of food and beverages. This product has also been used to selectively recover transition metals from aqueous solutions. The resin is insoluble in acids, alkalis, and all common solvents. In fact weakly acidic cation resins are increasingly being used in special applications including treatment of waste water streams in order to reduce environmental pollution. Purolite C107E has excellent selectivity for heavy metals and can be used as an economic replacement for Chelating Resins in some instances, especially in the removal of trace quantities of toxic metals from waste waters.

Basic Features:

Application	Dealkalization - Domestic Applications - Non-regenerable
Polymer Structure	Macroporous polymethacrylic crosslinked with divinylbenzene
Appearance	Spherical beads
Functional Group	Carboxylic Acid
Ionic form as shipped	H ⁺

Typical Physical and Chemical Characteristics:

Total Capacity (min.)	H ⁺	3.50 eq/l
Total Capacity (min.)	H ⁺	76.40 kGr/ft ³
Moisture Retention	H ⁺	53-58 %
Mean Size Typical		0.60-0.85 mm
Uniformity Coefficient (max.)		1.70
Reversible Swelling (max.)	H ⁺ → Na ⁺	90 %
Reversible Swelling (max.)	H ⁺ → Ca ₂ ⁺	25 %
Specific Gravity		1.18 g/ml
Shipping Weight (approx.)		710-745 g/l
Shipping Weight (approx.)		44-47 lbs/ft ³
Temp Limit	H ⁺	120 °C

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Temp Limit	H ⁺	250 °F
pH Limits		0-14

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