

Gel Type Weak Acid Cation Exchange Resin

Purolite C104E is a high capacity polyacrylic weak-acid cation exchanger. 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 provided that sufficient contact time for exchange is allowed. Its major use is in the dealkalization and softening of waters and aqueous organic solutions, thereby reducing the ionic load on the subsequent strong-acid resin bed. Because it has a lower density than the conventional strong-acid resins, Purolite C104, DL grade can be used in layered beds (Doublite) which can be economically regenerated by an upflow countercurrent technique. 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. Purolite C104E is specially treated to remove extractables. These properties make it ideal for use in potable and food grade applications.

Basic Features:

Application	Dealkalization; Deionization; Softening - Food and Potable Water
Polymer Structure	Gel polyacrylic crosslinked with divinylbenzene
Appearance	Spherical beads
Functional Group	Carboxylic Acid
Ionic form as shipped	H ⁺

Typical Physical and Chemical Characteristics:

Total Capacity (min.)	H ⁺	3.80 eq/l
Total Capacity (min.)	H ⁺	82.97 kGr/ft ³
Moisture Retention	H ⁺	45-55 %
Mean Size Typical		0.60-0.85 mm
Uniformity Coefficient (max.)		1.70
Reversible Swelling (max.)	H ⁺ → Na ⁺	85 %
Reversible Swelling (max.)	H ⁺ → Ca ₂ ⁺	20 %
Reversible Swelling (Operating)	H ⁺ → Ca ₂ ⁺	7 % (approx.)
Specific Gravity		1.18 g/ml
Shipping Weight (approx.)		735-770 g/l
Shipping Weight (approx.)		46-48 lbs/ft ³
Temp Limit	H ⁺	120 °C
Temp Limit	H ⁺	250 °F

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pH Limits		0-14
pH Limits	H ⁺	5-14 (Operating)

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