

Gel Type Weak Acid Cation Exchange Resin

Purolite PFC104 is a narrow size grading, 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, combined with its narrow particle size showing excellent uptake of alkaline earth metals. Its major use is in the dealkalization and softening of waters, thereby reducing the ionic load on the subsequent strong-acid resin bed. Weakly acidic cation resins are increasingly being used in special applications including treatment of waste water in order to reduce environmental pollution. Purolite PFC104 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; Deionization; Softening of Water & Aqueous Organic Solutions - Uniform Particle Size
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		0.52-0.62 mm
Uniformity Coefficient (max.)		1.20
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.)		725-750 g/l
Shipping Weight (approx.)		45-47 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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