

Gel Type Weak Acid Cation Exchange Resin

Purolite C104DL is a premium grade weak acid cation exchange resin specially tailored for use in the Purolite Doublet process. It is compatible with, and has been designed to be used in conjunction with Purolite C100DL or DLH. This Doublet resin system gives excellent high operating capacity, very low permanent ion leakage, at very high regeneration efficiency. The particle size range and resin sphere density are such that this weak acid cation exchange resin has excellent kinetics and filtration properties and separates easily from Purolite C100DL after the first exhaustion. The resin bed is designed to be regenerated counter current using down flow service, up flow regeneration, and the normal recommendations in terms of ionic concentration presented to the weak acid cation resin apply when using sulphuric acid regeneration. The resins should initially be charged as separate, backwashed layers. There is no need and it is not advisable to mix the new resins. If problems of separation arise, first pass dilute acid as used for regeneration, then pass 5 bed volumes of sodium chloride to convert the strong acid cation resin to the sodium form. The resins will then separate on backwashing.

Basic Features:

Application	Dealkalization; Deionization; Softening of Water & Aqueous Organic Solutions - Layered Beds
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		0.50-0.70 mm
Uniformity Coefficient (max.)		1.40
Reversible Swelling (max.)	H ⁺ → Na ⁺	85 %
Reversible Swelling (max.)	H ⁺ → Ca ₂ ⁺	20 %
Specific Gravity		1.18 g/ml
Shipping Weight (approx.)		735-760 g/l
Shipping Weight (approx.)		45-47 lbs/ft ³
Temp Limit	H ⁺	120 °C
Temp Limit	H ⁺	250 °F

pH Limits

0-14

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