

Macroporous Strong Acid Cation Exchange Resin - High Capacity

Purolite C160H is a macroporous poly(styrene sulphonate) cation-exchanger designed to withstand conditions of considerable thermal, osmotic and mechanical stress such as those found in ion-exchange treatment of concentrated aqueous solutions of glycerol, glycols, sugar alcohols, and other polyhydroxy organic compounds. Such treatment includes softening, catalysis, heavy metal removal, and various deionizing procedures. In the Quentin process, for example, in which sugar solutions of around 70° Brix are used, at high temperatures (60-70°C), its sponge-like structure permits higher rates of diffusion of the complex nitrogenous materials taken up by the strong-acid resin during demineralization, and facilitates their removal on regeneration. Purolite C160H can also be converted to the ammonium form for partial demineralization of concentrate syrups, and in the Gryllus process, both of which require a resin of superior resistance to thermal and osmotic shock. However, for use with the high viscosities normally encountered during the processing of sucrose, the more closely-graded version, Purolite C160S is normally recommended.

It is well suited to the selective removal of heavy metals where it offers usefully high selectivity combined with fast kinetics. The specially treated Nuclear Grade form is recommended for treatment of radioactive waste. Further details are given in the technical data sheet for Purolite NRW160.

Basic Features:

Application	Heavy Metal Removal - Organic Containing Solutions
Polymer Structure	Macroporous polystyrene crosslinked with divinylbenzene
Appearance	Spherical beads
Functional Group	Sulphonic acid
Ionic form as shipped	H ⁺

Typical Physical and Chemical Characteristics:

Total Capacity (min.)	Na ⁺	2.30 eq/l
Total Capacity (min.)	Na ⁺	50.22 kGr/ft ³
Moisture Retention	H ⁺	43-48 %
Mean Size Typical		0.60-0.85 mm
Uniformity Coefficient (max.)		1.70
Reversible Swelling (max.)	Na ⁺ → H ⁺	4 %
Specific Gravity		1.21 g/ml
Shipping Weight (approx.)		760-800 g/l
Shipping Weight (approx.)		47.5-50 lbs/ft ³
Temp Limit	H ⁺	120 °C
Temp Limit	H ⁺	250 °F

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PUROLITE® C160H
Strong Acid Cation Macroporous

Temp Limit	Na ⁺	140 °C
Temp Limit	Na ⁺	285 °F
pH Limits		0-14

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