

Mixed Bed Exchange Resin

Purolite MB59 is a resin mixture for direct purification of water, giving high operating capacities where partially demineralized water is acceptable. It is normally used in regenerable or non-regenerable cartridges or larger ion exchange units. Passage of water at recommended flow rates through the resin, as supplied, can achieve almost complete reduction of all cations and anions of strong acids such as chloride, sulphate and nitrate. Carbon dioxide and silica are not removed. The achieved average conductivity values and operating capacities are dependent on the alkalinity concentrations in the feed water. In order to produce the best performance from a directly usable mixed bed it is necessary to ensure that the component resins do not separate readily. This makes packing of the cartridges or vessels more efficient, though care still has to be taken that the techniques used to not cause unnecessary separation of the components.

Basic Features:

Application	Partial Demineralization
Polymer Structure	Gel/Macroporous polystyrene crosslinked with divinylbenzene
Appearance	Spherical beads
Functional Group	Sulphonic Acid and Tertiary Amine
Ionic form as shipped	H ⁺ / FB

Typical Physical and Chemical Characteristics:

Cation Component	Gel Strong Acid Cation	
Anion Component	Macroporous Weak Base Anion	
Cation / Anion Ratio	60 / 40 %	
Total Capacity (min.)	Na ⁺	1.90 eq/l
Total Capacity (min.)	Na ⁺	41.50 kGr/ft ³
Total Capacity (min.)	Free Base	1.30 eq/l
Total Capacity (min.)	Free Base	28.40 kGr/ft ³
Mean Size Typical	0.60-0.85 mm	
Uniformity Coefficient (max.)	1.70	
Shipping Weight (approx.)	720-755 g/l	
Shipping Weight (approx.)	45-47.2 lbs/ft ³	
Temp Limit	Non-Regenerable Bed	100 °C
Temp Limit	Non-Regenerable Bed	212 °F
Temp Limit	Regenerable Bed	60 °C

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Temp Limit	Regenerable Bed	140 °F
pH Limits		0-14

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