

Mixed Bed Exchange Resin

Purolite MB46 is a special high quality resin mixture for direct purification of water. The ratio of component resins has been specifically tailored to provide a high capacity for cations removable. It is therefore recommended where waters which contain bicarbonate, carbonate or even hydroxide ions are being treated, or where the limiting factor in performance could be kinetics of the cation resin. Waters which contain traces of iron or other metal corrosion contamination also benefit from treatment using this resin mixture. Purolite MB46 is suitable for use in regenerable or nonregenerable cartridges and in large ion exchange units. Passage of water at recommended flow rates through the resin as supplied can achieve almost complete reduction of total dissolved solids during the operation cycle. The residuals produce average conductivity values of less than 2 ms cm<sup>-1</sup> for a major portion of the service run which may be extended depending upon the final water quality acceptable. Almost equivalent volumes of pure water of identical quality may be obtained after regeneration but only if sufficient regenerant quantities are employed to achieve the percentage conversion levels equivalent to those of the "as supplied" resin. Generally acceptable capacity and quality is obtained economically at lower regeneration levels.

**Basic Features:**

Application	EDM Applications - High Capacity
Polymer Structure	Gel polystyrene crosslinked with divinylbenzene
Appearance	Spherical beads
Functional Group	Sulphonic Acid and Type 1 Quaternary Ammonium
Ionic form as shipped	H <sup>+</sup> / OH <sup>-</sup>

**Typical Physical and Chemical Characteristics:**

Cation Component	Gel Strong Acid Cation	
Anion Component	Gel Strong Base Anion	
Cation / Anion Ratio	50 / 50 %	
Total Capacity (min.)	Na <sup>+</sup>	2.00 eq/l
Total Capacity (min.)	Na <sup>+</sup>	43.70 kGr/ft <sup>3</sup>
Total Capacity (min.)	Cl <sup>-</sup>	1.40 eq/l
Total Capacity (min.)	Cl <sup>-</sup>	30.60 kGr/ft <sup>3</sup>
Moisture Content	60 %	
Mean Size Typical	0.60-0.85 mm	
Uniformity Coefficient (max.)	1.70	
Shipping Weight (approx.)	720-750 g/l	
Shipping Weight (approx.)	45-46.9 lbs/ft <sup>3</sup>	

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Temp Limit	Non-Regenerable Bed	100 °C
Temp Limit	Non-Regenerable Bed	212 °F
Temp Limit	Regenerable Bed	60 °C
Temp Limit	Regenerable Bed	140 °F
pH Limits		0-14

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