

Mixed Bed Exchange Resin - Self Indicating

Purolite MB-500 IND is a high quality resin mixture for direct purification of water. This resin mixture changes color from blue-green to cream on exhaustion. It is designed for use in both regenerable and non-regenerable cartridges. It contains an indicator which shows when the resin is exhausted and can no longer treat the water. The chromatographic profile is sharp when using standard flow rates of 5-40 BV/h, hence a sharp color change is observed and moves progressively down the bed as the resin is exhausted. Passage of water at recommended flow rates through the resin, as supplied, can achieve almost complete reduction of total dissolved solids. The residuals produce average conductivity values of about 0.1 µS/cm for a major portion of the service run. However it will be necessary to cease water production shortly prior to complete colour change if highest quality water is essential. Generally water with a conductivity between 5-30 µS/cm is obtained when the green-blue color finally disappears. This Purolite Mixed Bed Resin is supplied in black, air-tight packaging which contains both cationic and anionic component resins in the highly regenerated forms which ensures direct production of treated, demineralized water of the highest quality. Exposure of the mixture to the atmosphere for lengthy periods can result in some loss in hydroxide sites of the anion component by conversion to carbonate from carbon dioxide in the atmosphere. This can give rise to loss of treated water quality. Exposure of the resin to daylight can also result in loss of indicator color. Accordingly the resin should be loaded into the cartridges as soon as possible after opening the

**Basic Features:**

Application	Demineralization - High Purity Silica Free
Polymer Structure	Gel/Macroporous 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	Macroporous Strong Base Anion
Cation / Anion Ratio	40 / 60 %
Total Capacity (min.)	Na <sup>+</sup> 1.90 eq/l
Total Capacity (min.)	Na <sup>+</sup> 41.50 kGr/ft <sup>3</sup>
Total Capacity (min.)	Cl <sup>-</sup> 1.15 eq/l
Total Capacity (min.)	Cl <sup>-</sup> 25.10 kGr/ft <sup>3</sup>
Moisture Content	65 %
Mean Size Typical	0.60-0.85 mm
Uniformity Coefficient (max.)	1.70
Shipping Weight (approx.)	700-735 g/l

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Shipping Weight (approx.)		43.7-45.9 lbs/ft <sup>3</sup>
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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