PUROLITE®
ION EXCHANGE RESINS

ISO 9002 BSI REGISTERED FIRM FM 40352

MB-400

READY TO USE MIXED BED

Technical Data

PRODUCT DESCRIPTION

Purolite MB-400 is a high quality resin mixture for direct purification of water. It is suitable for use in regenerable or non-regenerable 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. The residuals produce average conductivity values of about 0.1 µs cm^{-1} for a major portion of the service run which may be extended depending upon the final water quality acceptable. Equivalent volumes of ultra pure water 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.

Typical Chemical and Physical Characteristics

Polymer Structure	**Gel polystyrene crosslinked with divinylbenzene**
Appearance	**Spherical beads**
Functional Groups	**Sulphonic acid and quaternary ammonium**
Ionic Form - as shipped	**Hydrogen - H^+, Hydroxide - OH^-**
Shipping Weight	**705-740 kg/m^3 (44-46 lb/ft^3)**
Screen Size Range (U.S. Standard Screen)	**16-50 mesh wet**
Particle Size Range (microns)	**+1200 < 5%, -300 < 1%**
Moisture Retention - as shipped	**65% max**
Total Exchange Capacity	
Cation component (Na^+ form)	**1.9 eq/l min**
Anion component (Cl^- form)	**1.3 eq/l min**
Percentage by volume	
Cation component	**40**
Anion component	**60**
Temperature Limit	
Non-regenerative bed	**100° C (212° F)**
Regenerative bed	**60° C (140° F)**
pH Limits	**None**

Notes

This resin mixture is manufactured with a very high percentage conversion to the hydrogen and hydroxide forms. Exposure to the atmosphere for more than half an hour can result in uptake of substantial quantities of carbon dioxide which can affect the performance of this product. Hence bags should be opened shortly before use and unused bags re-sealed carefully. This product should not be left in direct sunlight.

APPLICATIONS

Pure deionised water of the quality obtainable from **Purolite MB-400** has uses in many applications and industries. A few of these are included in the following list: in chemical and photographic laboratories, for water conditioning for steam irons, for topping up car batteries, for stain prevention in glazing industry, in the cleaning of glassware in catering and licensed trade, in the food industry (where E grade resin is required) and in hospitals.

Water may be passed either intermittently or continuously at flow rates up to 40 bed volumes per hour depending upon the total dissolved solids of the water to be treated. Where use is intermittent the provision of a recycle system will ensure that the treated water quality is the best possible. Alternatively after a period of shutdown the first water obtained when starting up can be discarded until the quality is satisfactory.

Many alternative ready to use resin mixtures are available from the Purolite range. They include other mixed beds including self-indicating resins, mixtures especially designed for operation at higher than average flow rates, and mixtures offering high capacity where purity is not critical, or where the feed water quality makes an alternative more suitable. For further details please contact your local Purolite office.