AMBERLITE™ MB20 Resin

Mixed Bed Resin for High Purity Water Applications

Description

AMBERLITE™ MB20 Resin is an ionically equilibrated mixed bed resin. It is a fully regenerated, ready-to-use mixture of a strong acid cation exchanger with a strong base type 1 anion exchanger. AMBERLITE MB20 Resin has been developed for the production of high purity water. It can be used for all applications requiring totally demineralised water, free of silica and of carbon dioxide.

The operating capacity of the mixed bed can be estimated using the following formula, which gives an approximate determination of volume of water that can be treated:

$$BV = \frac{500}{TDS\ (meq/l)} \quad \text{or} \quad gals = \frac{187500}{TDS\ (as\ CaCO_3)}$$

where BV (Bed Volume) is the number of litres of a feed water containing a TDS (Total Dissolved Solids) given in meq/L (or gals per ft^3 resin with TDS as $CaCO_3$) that can be demineralised with one litre of the resin mixture when run to exhaustion.

If required, AMBERLITE MB20 Resin can be regenerated after exhaustion. Both components must be separated by backwashing and regenerated separately.

Typical Physical and Chemical Properties

Physical form	Mixture of white to amber spherical beads
Matrix	Styrene divinylbenzene copolymer
Functional groups	Sulphonic acid and trimethylammonium
Ionic form as shipped	H^+/OH^-
Composition in volume	38–44% cation, 56–62% anion
Shipping density	715 g/L (45 lbs/ft^3)
Particle size	
< 0.300 mm, max.	3%

Suggested Operating Conditions

Maximum operating temperature	60°C / 140°F
Minimum bed depth	700 mm (2.3 ft)
Service flow rate	20–40 BV*/h (2.5–5 gpm/ft^3)
Regeneration	
Type	Cation: HCl or H_2SO_4 ; Anion: NaOH

*1 BV (Bed Volume) = 1 m^3 solution per m^3 resin or 7.5 gals per ft^3 resin

Packaging

25 liter bags or 7 cubic foot drum

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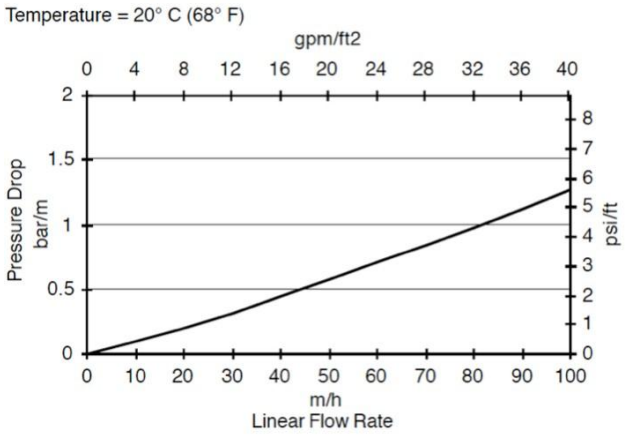
Hydraulic Characteristics

Figure 1. Pressure Drop Data



For other temperatures use:

$P_T = P_{20°C} / (0.026\ T_{°C} + 0.48)$, where P = bar/m

$P_T = P_{68°F} / (0.014\ T_{°F} + 0.05)$, where P = psi/ft

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

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DOW™ Ion Exchange Resins
For more information about DOW™ resins, call the Dow Water & Process Solutions business:
North America: 1-800-447-4369
Latin America: (+55) 11-5188-9222
Europe: (+32) 3-450-2240
Pacific: +60 3 7958 3392
Japan: +813 5460 2100
China: +86 21 2301 1000
http://www.dowwaterandprocess.com

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