Aldex Mixed Bed Series

MB-2 (SC) Mixed Bed Resin

*Aldex MB-2 (SC) is a highly regenerated mixed bed of a Type 2 strong base, gel anion exchange resin and a strong acid cation exchange resin, designed to provide **ultra-high purity water**. It can provide as much as 20 percent more throughput capacity than older style mixed beds while maintaining effluent purity levels in excess of 15 megohms. The special blend of Type 2 anion exchange resin with nuclear grade cation exchange resin ensure high effluent resistivity, low TOC extractables and excellent regenerable capacities for inorganic versus organic ions. It is recommended for all **polishing demineralizer** applications where high sensitivity, low silica water is required and is especially well-suited for cartridge applications.*

Physical Chemical Properties

Polymer Structure:	
Cation	Hydrogen form sulfonated polystyrene copolymer
Anion	Hydroxyl form strong base alkyl quaternary ammonium polystyrene copolymer
Ionic Form as Shipped:	Hydrogen / Hydroxide
Physical Form:	Spherical beads
Particle Size Distribution:	
16 mesh (U.S. Std.)	2% maximum
-40 mesh	2% maximum
pH Range:	0 to 14
Moisture Content	60% maximum
Conversion to ionic Form:	
Cation - Hydrogen	99% minimum
Anion - Hydroxide	95% minimum
Chloride (Cl^-)	1% maximum
Carbonate (CO_3^{-2})	2% maximum
Shipping Weight:	45 lbs per cubic foot
Total Capacity:	
Cation (H^+ form)	1.8 meq/ml
Anion (OH^- form)	1.2 meq/ml

Recommended Operating Conditions

Effluent Quality	Resin should provide effluent quality of 15 to 17 megohm but is dependent on many factors
Maximum Temperature:	
Regenerable	40°C
Non-regenerable	60°C
Slow Rinse (Displacement) Flow Rate:	2 to 10 US GPM per cubic foot

MB-2 (SC) Features

Very Low Metal Content

Special manufacturing conditions ensure very low metal content.

Elemental analysis, dry basis

Iron (Fe)	<100 ppm
Copper (Cu)	<50 ppm
Lead (Pb)	<50 ppm

Very Low TOC

Non solvent sulfonation and special manufacturing processes assure very low TOC leakage.

Uniform Particle Size

98% of all beads are in the minus 16 to plus 40 mesh range: giving a lower pressure drop while maintaining the superior kinetics of standard mesh size products.

Superior Physical Stability

90% plus sphericity and high crush strengths together with a very uniform particle size provide greater resistance to bead breakage while maintaining low pressure drop.

Safety Information

A material safety data sheet is available for Aldex MB-2 (SC). Copies can be obtained from Aldex Chemical Co., LTD. Aldex MB-2 (SC) is not a hazardous product and is not WHMIS controlled.

Caution: Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Before using strong oxidizing agents in contact with ion exchange resin, consult sources knowledgeable in the handling of these materials.

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ALDEX

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Pressure Drop

Fig. 1 shows the expected pressure loss per foot of bed depth as a function of flow rate at various temperatures.

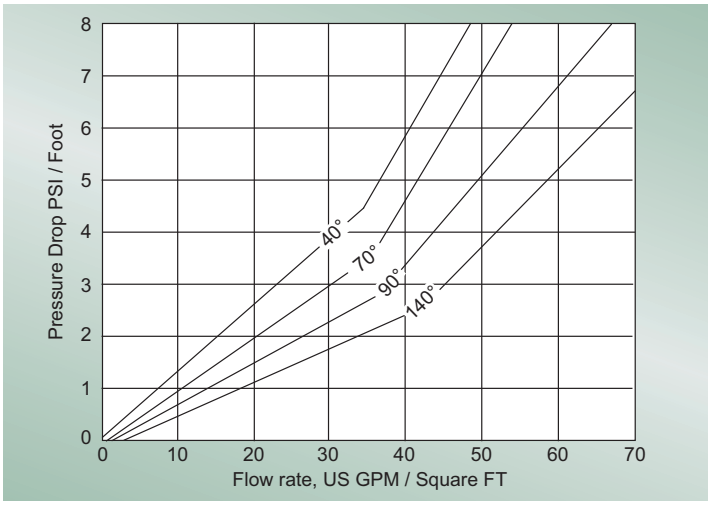

Fig. 1 Pressure Drop vs Flow Rate at various degrees Fahrenheit (F°)

Backwash Characteristics

After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. This will remove any foreign matter and reclassify the bed. Fig. 2 shows the expansion characteristics of Aldex MB-2 (SC) in the chloride form.

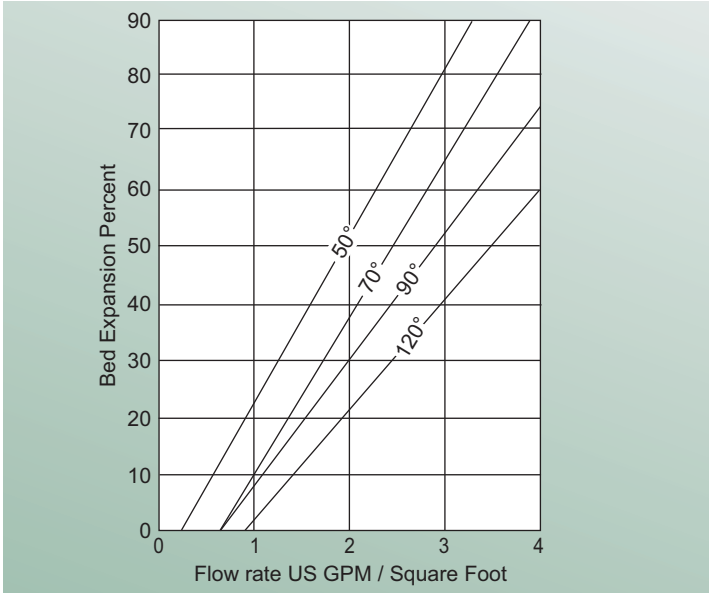

Fig. 2 Bed Expansion vs Flow Rate at various degrees Fahrenheit (F°)

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