Aldex Mixed Bed Series

MB-5050 Mixed Bed Resin

*Aldex MB-5050 is a **highly regenerated mixed bed of a Type 1 strong base, gel anion exchange resin** and a strong acid sulfonated polystyrene cation exchange resin, **designed to provide high purity water**. The special blend of Type 1 anion exchange resins with nuclear grade cation exchange resins ensure high resistance, low TOC extractables and excellent regenerable capacities for inorganic versus organic ions. Aldex MB-5050 is provided in a 50:50 anion to cation ratio (by volume).*

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}	4% maximum
Shipping Weight:	45 lbs per cubic foot
Total Capacity:	
Cation (H form)	1.8 eq/l
Anion (OH form)	1.0 eq/l

Recommended Operating Conditions

Effluent Quality	Resin should provide effluent quality of 5 to 10 megohm water but is dependent on many factors
Maximum Temperature:	
Regenerable	60°C
Non-regenerable	100°C
Slow Rinse (Displacement) Flow Rate:	2 to 10 US GPM per cubic foot

MB-5050 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-5050. Copies can be obtained from Aldex Chemical Co., LTD. Aldex MB-5050 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.

Aldex Chemical Company, Ltd. • 630 Laurent Street • Granby QC Canada J2G 8V1
450 372 8844 • Fax 450 372 2566 • info@aldexchemical.com

These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However, we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents. Further, we assume no liability for the consequences of such actions.

Since 1976

ALDEX

aldexchemical.com

Aldex Mixed Bed Series

MB-5050 Mixed Bed Resin

Backwash Characteristics

Aldex MB-5050 should be backwashed for at least 10 minutes after each service cycle in a conventional down flow regenerate unit. To reclassify the beads and remove suspended solids from the top of the bed, the resin bed should be expanded at least 50% according to Fig 1.

In case of non-conventional or upflow regenerated units, it may not be necessary to follow the above procedure.

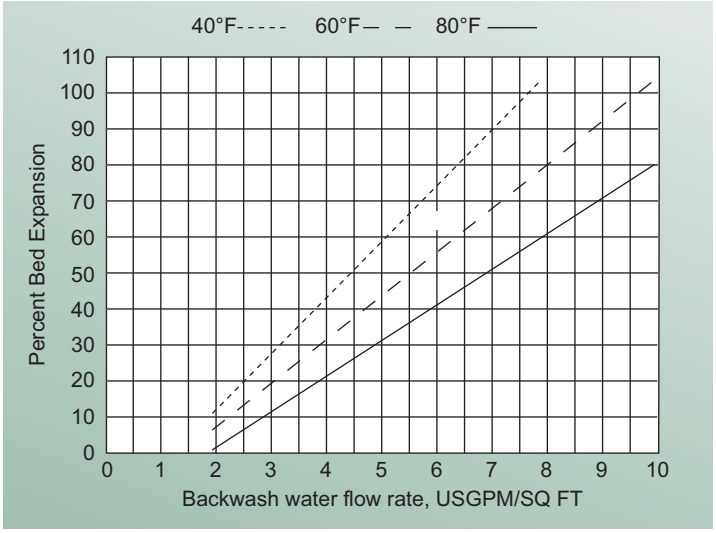

Fig. 1 Bed Expansion vs. Backwash Flow Rate at various degrees Fahrenheit (F°)

Pressure Drop

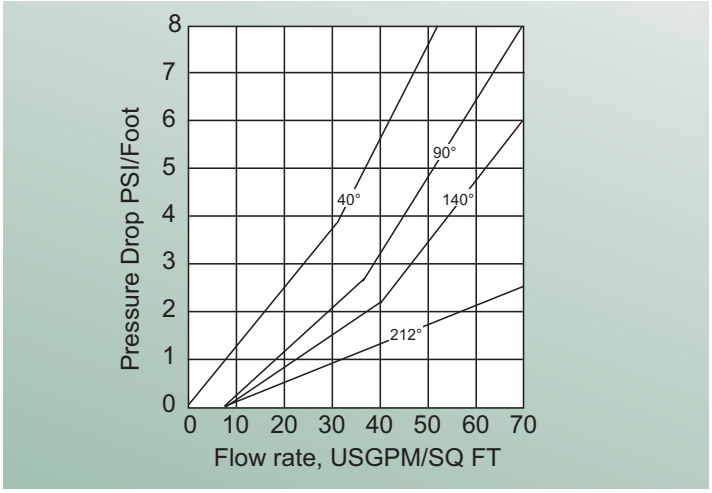

Fig. 2 Pressure Drop vs Flow Rate at various degrees Fahrenheit (F°)

Aldex Chemical Company, Ltd. • 630 Laurent Street • Granby QC Canada J2G 8V1
450 372 8844 • Fax 450 372 2566 • info@aldexchemical.com

These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However, we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents. Further, we assume no liability for the consequences of such actions.