Aldex Chelation Resin (CR) Series

CR 5 Boron Removal Media

*Aldex CR 5 is a **macroporous crosslinked polystyrene resin with functional group of N-Methylglucamine**. This resin is **in 'Free Base' form**. Aldex CR 5 removes Boron and its salts which is a major concern especially in certain Chemical Industries and Agriculture. This resin effectively removes boron and its salts over wide pH Range in presence of other ions.*

Physical Chemical Properties

Polymer Structure:	Macroporous, cross-linked polystyrene
Physical Form:	Spherical Beads
Functional Group:	N-Methylglucamine
Ionic Form as Shipped:	Free Base (FB)
Sphericity:	95% minimum
Screen Size Range (U.S. Standard):	16 to 50 mesh, wet
Particle Size Range:	0.3 to 1.2 mm ≥ 90
Uniformity Coefficient:	1.6 maximum
Reversible Swelling, FB to Cl^-:	25% maximum
Specific Gravity, FB form:	1.10
Moisture Retention, Free Base Form:	45 to 55%
Shipping Weight (approx.):	670 to 730 g/l
Total Exchange Capacity, Free Base Form:	≥0.6 eq/l
Temperature Limit:	60°C (140°F)
pH Range (operating):	4 to 10
Boron capacity:	> 2.5 gm B/lit

Recommended Operating Conditions

Maximum Temperature:	60°C
Service Flow Rate:	4 to 30 BV/h
Regeneration:	Dependant on application

Operating Capacity

The practical capacity of Aldex CR 5 is dependent on the flow rate passing through the resin column for different applications.

Regeneration

Regeneration is done with 4% HCl or 5% H_2SO_4.

There are several regeneration procedures and they are dependent on the application. Regeneration procedures may be obtained from Aldex Chemical Co., LTD.

Applications

This resin is highly efficient in removing targeted ion 'Boron' with wide pH Range without affecting harmless ions like calcium, Bicarbonate, Chloride, sodium for certain applications. And resin works effectively at higher flow rates.

Safety Information

A material safety data sheet is available for Aldex CR 5. Copies can be obtained from Aldex Chemical Co., LTD. Aldex CR 5 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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Backwash Expansion

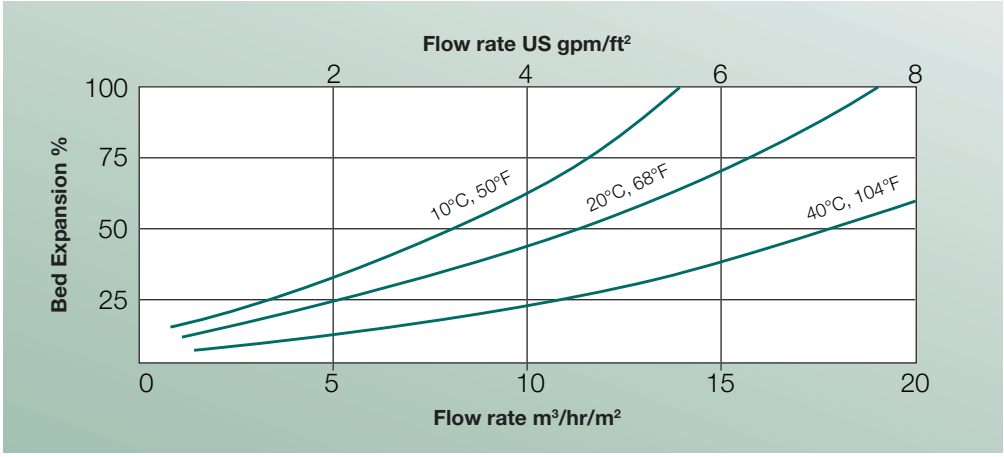

Fig. 1 Guidance on appropriate flow rates for backwash.

Pressure Drop vs Flow Rate

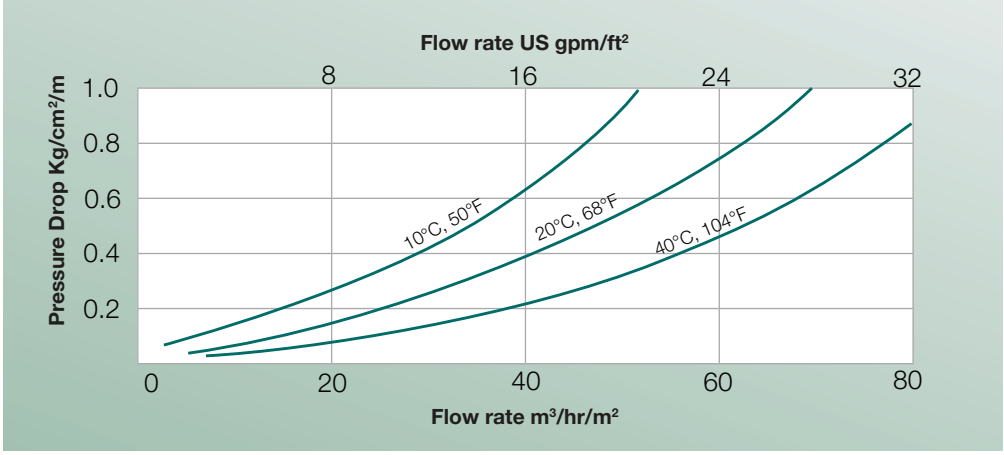

Fig. 2 Expected pressure drop across the resin bed for various linear flow rates.

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