Aldex Stong Base Anion Series

NSR Strong Base Anion Macroporous Nitrate Selective Resin

Tested and certified by WQA in according to NSF/ANSI/CAN 61 and NSF/ANSI 44. *Aldex NSR is a macroporous, strong base anion which is* ***highly selective for nitrates over sulfates****. Aldex NSR's unique functional group* ***eliminates nitrate dumping at the end of the run even in the presence of high sulfates****. Its resistance to nitrate dumping makes Aldex NSR a superior resin in nitrate removal applications. Further, the functional group used to manufacture Aldex NSR has shown a very high affinity for perchlorate, making this the resin of choice when designing non-regenerable, perchlorate remediation systems.*

Physical Chemical Properties

Polymer Structure:	S-DVB resin
Appearance:	Opaque beads
Functional Group:	tributylamine quaternized
Ionic Form as shipped:	Chloride
Total Capacity, Cl form:	0.85 to .95 eq/l
Moisture Content, Cl^- form:	51 to 57%
Mean Diameter:	600 ± 100 µm
Uniformity Coefficient (max.):	1.6 to 1.8
Specific Gravity:	1.06 to 1.08
Shipping Weight (approx.):	670 to 710 g/l (42-44 lbs/ft^3)
Temp Limit, Cl- Form:	100°C
pH limits, Stability:	0 to 14

Typical Operating Conditions

Maximum Operating Temp.:	175°F (80°C)
Resin bed Depth:	24" (600 mm) minimum
Recommended Service Flow:	1 to 4 gpm/ft3
Backwash Expansion:	50 to 70%
Backwash Expansion Flow Rate at 77ºF(25ºC):	1.6 to 2.5 gpm/ft2
Regenerant:	NaCl
Regeneration level:	8 to10 lbs/cu.ft.
Regenerant concentration:	8 to 12%
Regeneration time:	20 to 60 minutes
Slow rinse flow rate:	At regeneration flow rate
Fast rinse flow rate:	At service flow rate
Rinse Volume:	15 to 50 gal/ft3
Influent Limitations	
Free Chlorine:	Not traceable
Turbidity:	Less than 2 N.T.U
Iron and Heavy metals:	Less than 0.1 ppm

Applications

Aldex NSR is often selected when chromatographic dumping of nitrates must be avoided at all cost. Due to its unique functional group Aldex NSR will provide the highest operating capacity possible of any selective resin. Further, water processed using Aldex NSR will be able to meet EC as well as North American guidelines for potable water.

NSR Features

Very Low Color, Taste or Odor

Aldex NSR meets the requirements for paragraph 173.25 of the Food Additive Regulation of the U.S. Food and Drug Administration.

Long Life

Strong and durable beads ensure long service life.

Reliability

Aldex Chemical has over 45 years of field usage by thousands of customers demonstrates the reliability of Aldex ion exchange resins, zeolites and other water treatment media.

Safety Information

A material safety data sheet is available for Aldex NSR. Copies can be obtained from Aldex Chemical Co., LTD. Aldex NSR 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.

Tested and certified by WQA according to NSF/ANSI/CAN 61 and NSF/ANSI 44 for materials safety only. For use restrictions, please visit www.wqa.org.

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NSR Strong Base Anion Exchange Resin

Pressure Drop

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

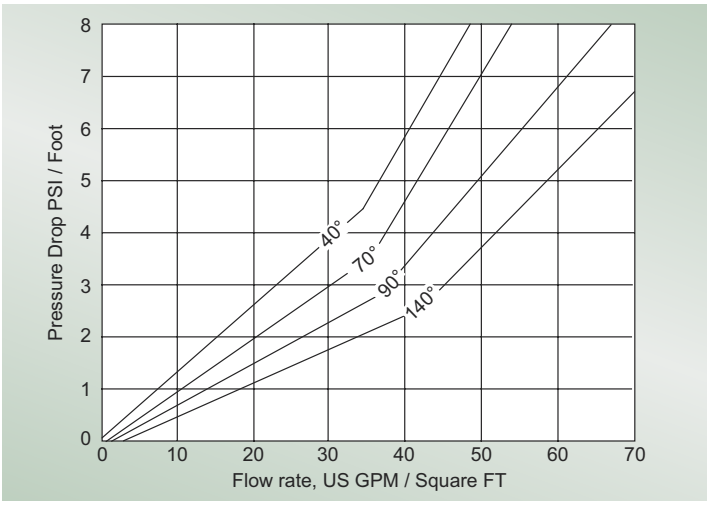

Fig. 1 Pressure Drop vs Flow Rate at various degrees Fahrenheit (F°)

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 NSR in the chloride form.

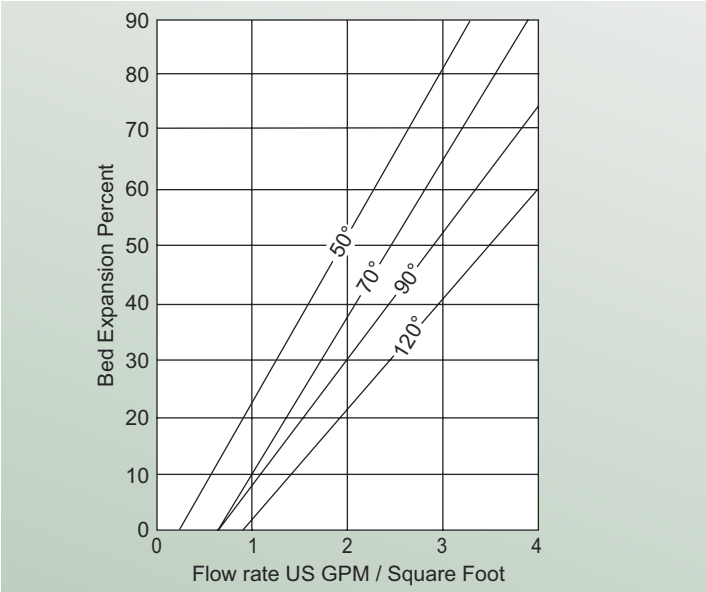

Fig. 2 Bed Expansion vs Flow Rate at various degrees Fahrenheit (F°)

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