

Aldex Gellular Strong Base Series

GCRA Gellular Strong Base Anion Exchange Resin - Acrylic

Aldex GCRA is a **strong base, Type 1 resin having a cross-linked acrylic matrix**. Aldex GCRA is a high capacity, gellular resin supplied most often in the chloride form (or OH form on request). Because of its aliphatic structure Aldex GCRA **shows superior resistance to organic fouling in comparison with polystyrene strong base resins**. When used in water treatment deionization, the resin has high operating capacity with efficient regeneration like type 2 resins. However, silica leakages more like a type 1 resin. Aldex GCRA can be regenerated with a variety of salts (NaCl, KCl) and may be used in potable water applications to remove tannins and other organic compounds.

Physical Chemical Properties

Polymer Structure:	Gel polyacrylic crosslinked with divinylbenzene
Functional group:	Quaternary Ammonium
Ionic Form as Shipped:	Chloride
Physical Form:	Spherical beads
Moisture Content:	57 to 62%
Shipping Weight (Cl ⁻ Form):	43 to 45 lbs per cubic foot
Total Capacity (Cl ⁻ Form):	1.25 eq/l
Specific Gravity:	1.09
Temperature Limit:	
Cl ⁻ Form	80°C
OH ⁻ Form	40°C

Recommended Operating Conditions

Maximum Temperature (Cl ⁻):	80°C
Bed Depth:	30" minimum
Regenerant Strength:	5% to 10% NaCl
Regenerant Flow Rate:	0.3 to 0.5 US gpm/ft ²
Regenerant Dosage Level:	6-15 lbs per cubic foot
Slow Rinse Volume:	20 US gallons per cubic foot
Service Flow Rate:	1 to 5 US gpm/ft ³
Slow Rinse Flow Rate:	0.3 to 0.5 US gpm/ft ³
Fast Rinse Rate:	2 to 5 US gpm/ft ³
Fast Rinse Volume:	30 US gallons per cubic foot
Inlet Water Limitations:	
Turbidity	1.0 ppm maximum
Free Chlorine	1.0 ppm maximum

GCRA Features

Very low color, taste or odor

Aldex GCRA 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 insure long service life.

Reliability

Aldex Chemical has over 34 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 GCRA. Copies can be obtained from Aldex Chemical Co., LTD. Aldex GCRA 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 standards 44 and 61 for materials safety only.



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Pressure Drop

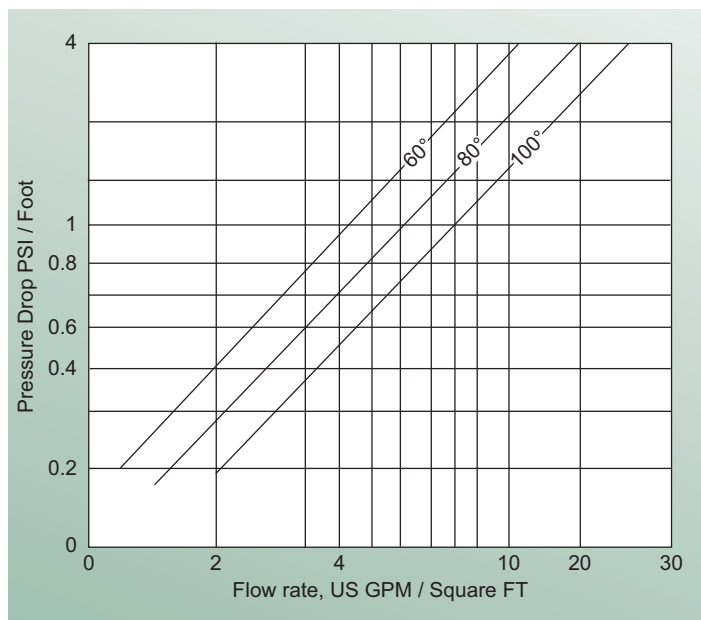


Fig. 1 Pressure Drop vs. Flow Rate for various degrees Fahrenheit (°F)

Backwash Characteristics

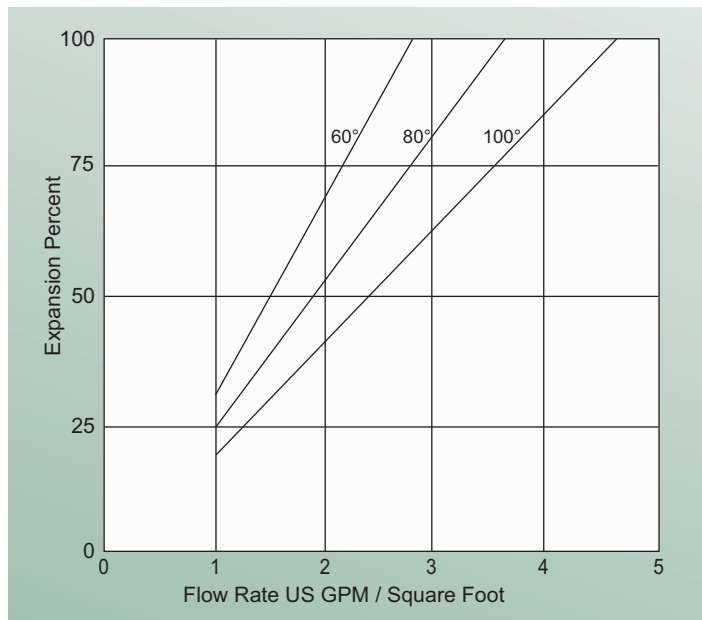


Fig. 2 Expansion vs. Flow Rate for various degrees Fahrenheit (°F)

Applications

Aldex GCRA should be regenerated with 10% sodium chloride at a minimum of 10 lbs NaCl per cubic foot. If color bleeds after regeneration either the frequency or the salt level should be increased.

Once the tannins have been adsorbed on the resin and the resin has been exhausted, it should be regenerated as soon as possible. This prevents the tannins from permanently fouling the resin. Aldex GCRA should be regenerated prior to vacation periods or seasonal shut down.

Aldex GCRA can be used on waters with moderate hardness, 5 to 10 grains/USG depending upon the sulfate and carbonate concentrations. Higher hardness waters require a softener prior to the tannin removal step.

On low hardness waters Aldex GCRA can be layered above the cation resin in a conventional water softener.

