Aldex C-800 Series • Manufactured in Canada using no chlorinated solvents • Lowest TOC

C-800x10H UPS Strong Acid Cation Exchange Resin

Aldex C-800x10H UPS is a strongly acidic, high quality, gel-type cation resin supplied in the **hydrogen form**. *It is manufactured under special conditions to meet the exacting requirements for* **ultrapure water production**.

Physical Chemical Properties

Polymer Structure:	Sulfonated Styrene / divinylbenzene copolymer
Ionic Form as Shipped:	Hydrogen
Physical Form:	Tough, spherical beads
Screen Size Distribution:	
+20-40 mesh (US std.)	95% minimum
-50 mesh	< 0.5%
pH Range:	0 to 14
Moisture Content:	50 to 54%
Conversion to H+ Form:	99% minimum
Shipping Weight:	50 lbs per cubic foot
Total Capacity H+ Form:	2.0 meq/ml minimum
Specific Gravity:	1.24

Recommended Operating Conditions

Influent pH:	No restrictions
Maximum Temperature:	250 °F
Bed Depth:	Minimum 24" Normal 36"
Service Flow Rate:	1 to 10 US GMP per cubic foot
Backwash Flow Rate:	See Fig. 1
Regenerant:	1 to 8% H_2SO_4 or HCl
Regenerant Flow Rate:	0.3 to 1.5 US GPM per cubic foot resin
Regenerant Contact Time:	15 to 60 minutes
Regenerant Dosage Level:	2 to 15 lbs of regenerant per cubic foot
Slow Rinse (Displacement) Flow Rate:	0.3 to 1.5 US GPM per cubic foot
Slow Rinse Volume:	20 USG per cubic foot resin
Fast Rinse Rate:	1.0 to 10 US GPM per cubic foot
Fast Rinse Volume:	30-60 USG per cubic foot resin

C-800x10H UPS Features

Elemental analysis, dry basis

Sodium (Na)	<100 ppm
Cobalt (Co)	<50 ppm
Copper (Cu)	<50 ppm
Aluminum (Al)	<50 ppm
Iron (Fe)	<50 ppm

Very Low TOC

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

Uniform Particle Size

99% 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 C-800x10H UPS. Copies can be obtained from Aldex Chemical Co., LTD. Aldex C-800x10H UPS 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.

Since 1976

ALDEX

aldexchemical.com

Aldex C-800 Series • Manufactured in Canada using no chlorinated solvents • Lowest TOC

C-800x10H UPS Strong Acid Cation Exchange Resin

Backwash Characteristics

Aldex C-800x10H UPS 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.

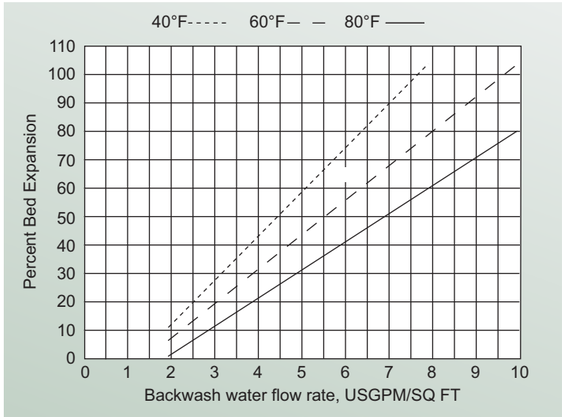

Fig. 1 Bed Expansion vs. Backwash Flow Rate at various degrees Fahrenheit (F°)

Pressure Drop

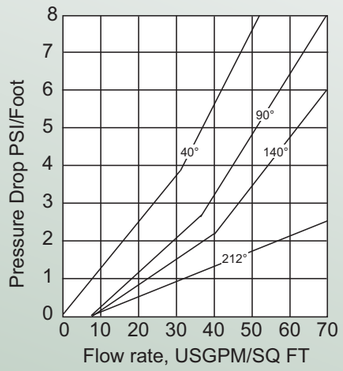

Fig. 2 Pressure Drop vs Flow Rate at various degrees Fahrenheit (F°)

Operating Capacity

The following table (Fig 3.) shows the hydrogen cycle relationship between operating capacity and regeneration level when using sulfuric acid as the regenerant.

The calcium data is based on an acid concentration of 2% in order to avoid calcium sulfate precipitation. Higher operation capacities could be obtained using a step wise increase in acid concentration to avoid the calcium problem. For more information please contact our technical department.

POUNDS H_2SO_4 per cubic foot	Capacity kilograins per cubic foot	
	500 ppm $CaCO_3$ NaCl	500 ppm $CaCO_3$ $CaCl_2$
5	19.0	11.5
7.5	23.0	12.8
10	25.3	13.6
15	28.1	14.5
20	29.7	15.0

Fig. 3

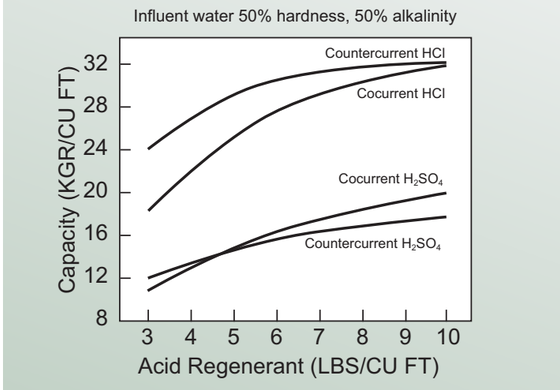

Fig. 4 Typical Aldex C-800x10H UPS Operating Capacities

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