

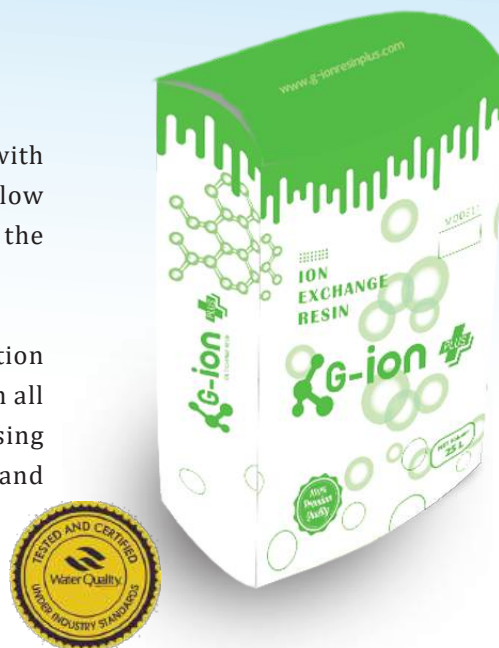
ZGA304

Gel Strong Base Anion Exchange Resin

Product Description & Applications

ZGA304 is a Type I, gel strong-base anion exchange resin with both high operating capacity and the ability to achieve low residual silica levels, supplied as spherical beads in the chloride form. ZGA304 is available in Cl or OH form.

ZGA304 is for regeneration efficient demineralization including silica removal. ZGA304 is also intended for use in all type of deionization systems and chemical processing applications, especially suited for use in mixed bed and layered bed demineralizer systems.



Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Polystyrene crosslinked with 4% DVB
Functional Group	R-N(CH ₃) ₃ ⁺
Ionic Form, as shipped	(Cl ⁻)
Physical Form And Appearance	Clear Spherical Beads
Sphericity	95% min.
Screen Size Range-U.S. Standard Screen	16-50 mesh, wet
Particle Size Range	0.315-1.25mm
Uniformity Coefficient	1.7 max.
Water Retention, Cl- form	48-58%
Swelling Cl- → OH	20-30%
Shipping Weight, Cl- form	660-710 g/l (43 lbs/cu.ft, approx.)
Total Exchange Capacity, Cl- form	1.3 eq/l min.
pH Range	0-14

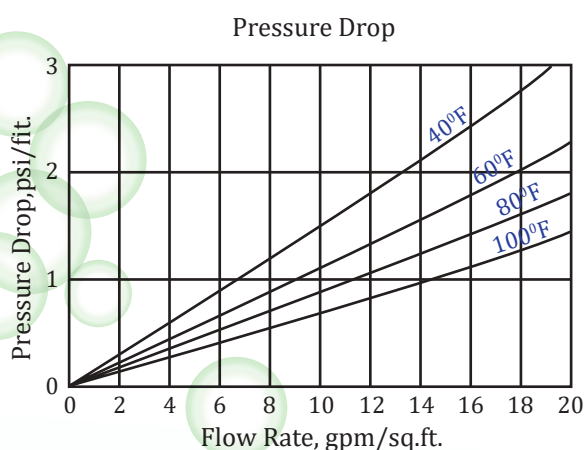
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Suggested operating conditions

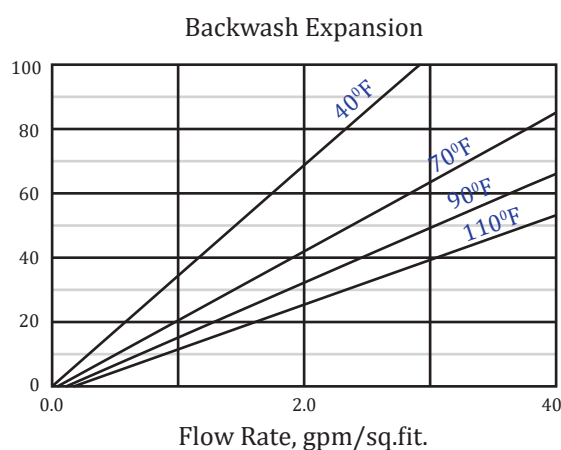
Maximum Temperature	Cl- form	100°C (212°F) max.
	OH- form	60°C (140°F) max.
Minimum Bed Depth		0.6 m (24 inches)
Backwash Expansion		50-75%
Regeneration	Regenerant Concentration	4-6% NaOH
	Flow Rate	2 to 4 BV/h (0.25 to 0.50 gpm/cu.ft)
	Contact Time	At least 60 Minutes
Displacement Rinse Rate		Same as Regenerant Flow Rate
Displacement Rinse Volume		10 -15 gallons/cu.ft
Fast Rinse Rate		Same as Service Flow Rate
Fast Rinse Volume		35-60 gallons/cu.ft
Service Flow Rate		4-8 BV/h (1.0-5.0 gpm/cu.ft)

Hydraulic properties



Pressure Drop:

The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate at various Temperatures.



Backwash:

After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. That will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of Pure G-ion plus ZGA304 in the sodium form.

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Packing and storing conditions

25 Ltr printed bag. Resins should be stored in their original unopened packaging in a cool dry area. An indoor storage facility with climate control between 0-40° C (32-105° F) should be used for the best results. Storage temperatures above 40° C (105° F) can cause premature loss of capacity for anion resins, particularly those stored in the OH-form. While cation resins can withstand higher temperatures (up to 80° C/175° F), it is best to store all resins under similar conditions. Storage temperatures below 0° C (32° F) can cause resin freezing. Tests of G-ion resins under repeated freeze-thaw cycles show that bead damage can occur, so frozen resin must be thawed before safe loading can take place. Frozen resin should be thawed out completely under room temperature conditions before loading and use.

