

# GA-510

## Marcoporous Strong Base Anion Exchange Resin

### Product Description & Applications

G-ion GA-510 is a Type I, macroporous strong-base anion exchange resin with an acrylic matrix, as high capacity, shock resistant with high physical stability.

G-ion GA-510 is used in decolorisation from sugar production (especially cane sugar) and decolorisation of organic products (glycerine, amino acids).

G-ion GA-510 is also used for Organic Removal and Tannin & Color Removal.

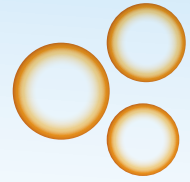


### Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Poly-acrylic Crosslinked with DVB
Functional Group	R-N-(CH <sub>3</sub> ) <sub>3</sub> +X
Ionic Form, as shipped	Chloride (Cl <sup>-</sup> )
Physical Form And Appearance	Clear Spherical Beads
Puerility	95% min.
Screen Size Range-U.S. Standard Screen	16-50 mesh, wet
Particle Size Range	0.315-1.25mm
Uniformity Coefficient	1.6 max.
Water Retention, Na <sup>+</sup> form	43-48%
Swelling Na <sup>+</sup> H <sup>+</sup> → Ca <sup>2+</sup> → Na <sup>+</sup>	10% max. 5% max.
Shipping Weight, Na <sup>+</sup> form	780-880 g/l (51 lbs/cu.ft, approx.)
Total Exchange Capacity, Na <sup>+</sup> form	2.0 eq/l min.
pH Range	0-14

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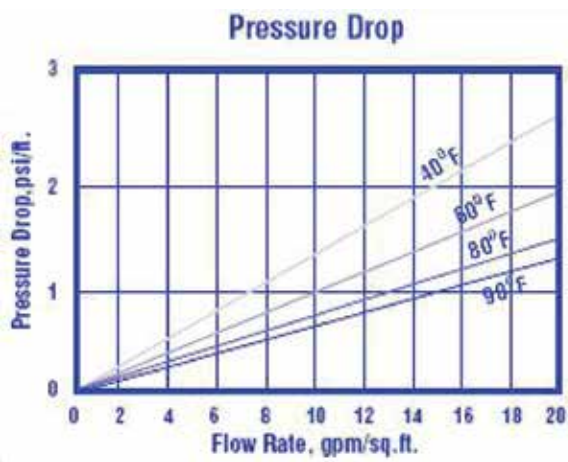
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### Suggested operating conditions

Maximum Temperature	Na <sup>+</sup> form	120°C (248°F) max.
	H <sup>+</sup> form	100°C (212°F) max.
Minimum Bed Depth		0,6 m (24 inches)
Backwash Rate		25-50% Bed Expansion
Regeneration	Sodium Cycle	8-20% NaCl
	Hydrogen Cycle	10% HCl, 2-8% H <sub>2</sub> SO <sub>4</sub>
	Flow Rate	2 to 7 BV/h (0,25 to 0,90 gpm/cu.ft)
	Contact Time	At least 30 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 GA-510 in the sodium form.