

GRAVEX



Graver Technologies

GR 3-0 UP

Ultra Pure Grade

Gravex GR 3-0 UP is a high capacity mixed bed ion exchange resin product. It is a chemically equivalent mixture of a Type I, gel anion exchange resin and a gel cation exchange resin. Each component is highly regenerated and specially processed to insure low TOC levels for ultrapure water applications. It is suitable for polishing the effluent from a two bed system of GR 2-0 UP and GR 1-0 UP or may be used as a once-through high purity mixed bed.

TYPICAL PROPERTIES

Type		Strong Acid Cation	Strong Base Anion
Matrix		Styrene Divinylbenzene	Styrene Divinylbenzene
Functionality		Sulfonic Acid	Quaternary Ammonium
Ionic Form		Hydrogen	Hydroxide
Total Exchange Capacity	meq/mL	2.0 (min)	1.2 (min)
Hydroxide Conversion	%		97 (min)
Water Retention	%	46–52	43–48 (Cl Form)
Friability			
Average	g/bead	500 (min)	350 (min)
> 200 g/bead	%	95 (min)	95 (min)
Particle Size			
> 16 mesh	%	2 (max)	2 (max)
< 45 mesh	%	2 (max)	2 (max)
Approx. Shipping Weight	lbs/ft ³	43	

RINSE PROPERTIES

5 ppb ΔTOC	Bed Volumes	20 (max)
18 megohm-cm Resistivity	Bed Volumes	20 (max)



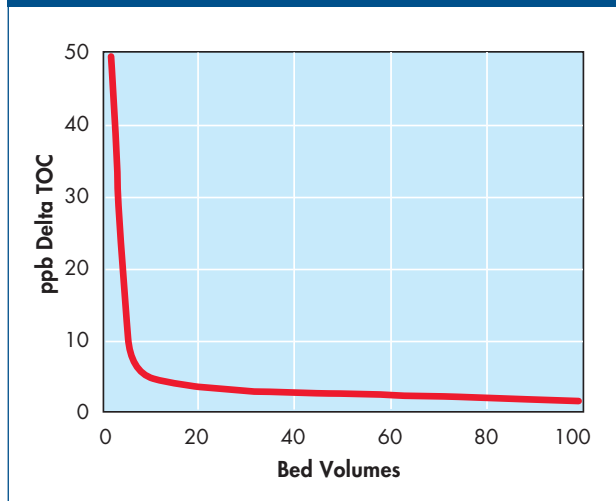
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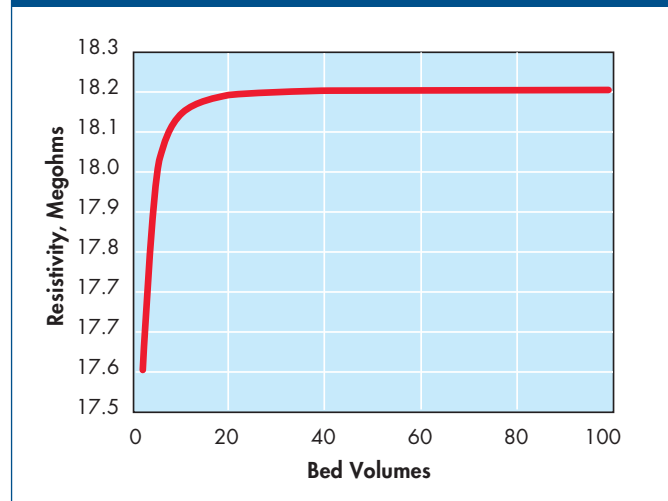
RECOMMENDED OPERATING CONDITIONS

Max. Operating Temperature	60°C (140°F)
Min. Bed Depth	800 mm (2.6 ft)
Linear Flow Rate	5–60 m/hr (2–24 gpm/ft ²)
Volume Flow Rate	8–48 BV/hr (1–6 gpm/ft ³)

GR 3-0 UP – TYPICAL DELTA TOC



GR 3-0 UP – TYPICAL RESISTIVITY RINSE UP



For more information

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