



PA300

Anion Exchange Resin
Macroporous Weak Base

High Quality & Cost-Effective

Product Description

Pure PA300 is a macroporous polystyrene weak-base anion exchange resin having tertiary amine functionality. **Pure PA300** has superior kinetics and greater resistance to oxidation and osmotic shock, high chemical and physical stability.

Applications

Pure PA300 is intended primarily for use in multiple bed demineralizers. It can be used in a two-bed system following a strong acid cation exchanger such as **Pure PC003** where weak acid ions (silica and carbon dioxide) do not have to be removed. **Pure PA300** can also be used in a separate bed, ahead of the strong base exchanger to remove organics and strong acid ions.

Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Macroporous Polystyrene with DVB
Functional Group	R-N-(CH ₃) ₂ ⁺
Ionic Form, as shipped	Free Base
Physical Form And Appearance	Spherical Beads
Sphericity	95% min.
Screen Size Range --- U.S. Standard Screen	16-50 mesh, wet
Particle Size Range	+1.2 mm < 5%, -0.3 mm < 1%
Uniformity Coefficient	1.6 max.
Water Retention, Free Base	50-60%
Swelling Free Base → Cl ⁻	20-30%
Shipping Weight, Free Base	650-720 g/l (42 lbs/cu.ft, approx.)
Total Exchange Capacity, Free Base	1.45 eq/l min.
pH Range	0-14

PURE RESIN COMPANY LIMITED

No.10 Weisan Road, HSEDA, Shangyu, Shaoxing, Zhejiang 312369, China
P. +86-571-8721-1518 F. +86-571-8721-1508 info@pureresin.com

WWW.PURERESIN.COM



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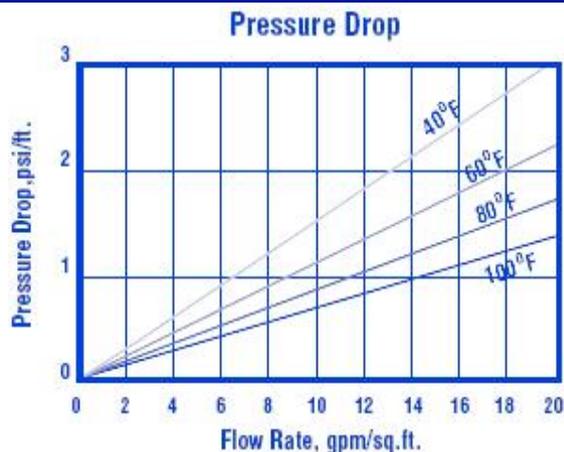
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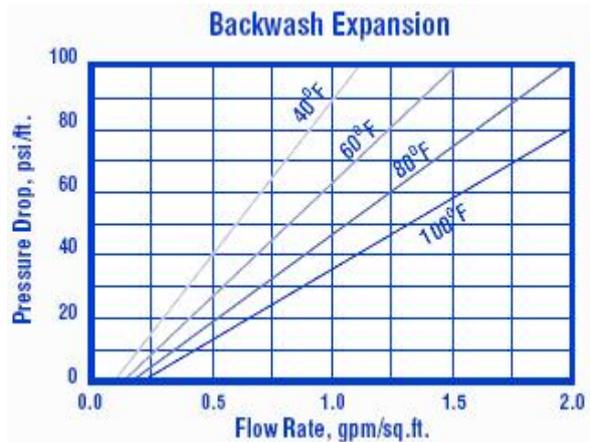
Suggested Operating Conditions

Maximum Temperature Free Base	80°C (176°F) max.
Minimum Bed Depth	0.6 m (24 inches)
Backwash Expansion	50-75% bed expansion
Regeneration	
Regenerant Concentration	2-6% NaOH
Flow Rate	2 to 8 BV/h (0.25 to 1.0 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	16-32 BV/h (2.0- 4.0 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. This will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of **PA300**.