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PRODUCT DATA SHEET

Purolite® A300E

Polystyrenic Gel, Type II Strong Base Anion Resin, Chloride form, FDA 21 CFR 173.25, Potable Water Grade

PRINCIPAL APPLICATIONS

- Demineralization - Potable Water
- Alkalinity Removal
- Uranium Removal
- Nitrate Removal
- Sulfate Removal

ADVANTAGES

- High operating capacity
- Efficient regeneration

REGULATORY APPROVALS

- Compliant with FDA Regulation 21 CFR 173.25 for Food Treatment, Ion Exchangers
- Certified by the WQA to NSF/ANSI-61 Standard
- IFANCA Halal Certified
- LPPOM MUI Halal Certified

TYPICAL PACKAGING

- 1 ft^3 Sack
- 25 L Sack
- 5 ft^3 Drum (Fiber)
- 1 m^3 Supersack
- 42 ft^3 Supersack

TYPICAL PHYSICAL & CHEMICAL CHARACTERISTICS:

Polymer Structure	Gel polystyrene crosslinked with divinylbenzene
Appearance	Spherical Beads
Functional Group	Type II Quaternary Ammonium
Ionic Form	Cl^-
Total Capacity (min.)	1.4 eq/L (30.6 Kgr/ft^3) (Cl^- form)
Moisture Retention	40 - 45 % (Cl^- form)
Particle Size Range	300 - 1200 µm
< 300 µm (max.)	1 %
Uniformity Coefficient (max.)	1.7
Reversible Swelling, $Cl^- \rightarrow OH^-$ (max.)	20 %
Specific Gravity	1.09
Shipping Weight (approx.)	685 - 720 g/L (42.8 - 45.0 lb/ft^3)
Temperature Limit	85 °C (185.0 °F) (Cl^- form)
Temperature Limit	35 °C (95.0 °F) (OH^- form)

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Hydraulic Characteristics

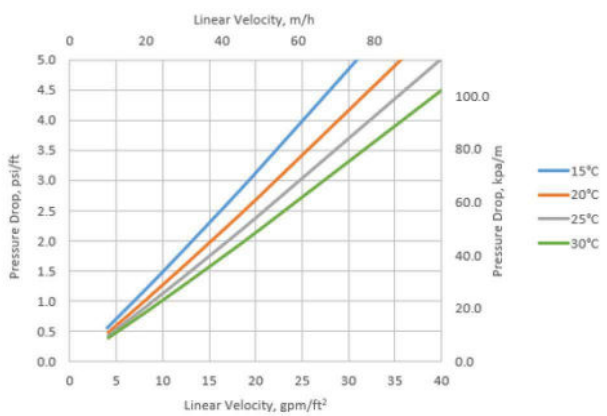
PRESSURE DROP

The pressure drop across a bed of ion exchange resin depends on the particle size distribution, bed depth, and voids volume of the exchange material, as well as on the flow rate and viscosity of the influent solution. Factors affecting any of these parameters—such as the presence of particulate matter filtered out by the bed, abnormal compressibility of the resin, or the incomplete classification of the bed—will have an adverse effect, and result in an increased head loss. Depending on the quality of the influent water, the application and the design of the plant, service flow rates may vary from 10 to 40 BV/h.

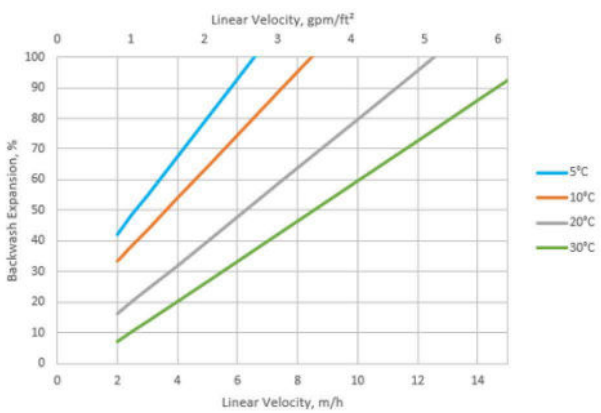
BACKWASH

During up-flow backwash, the resin bed should be expanded in volume between 50 and 70% for at least 10 to 15 minutes. This operation will free particulate matter, clear the bed of bubbles and voids, and reclassify the resin particles ensuring minimum resistance to flow. When first putting into service, approximately 30 minutes of expansion is usually sufficient to properly classify the bed. It is important to note that bed expansion increases with flow rate and decreases with influent fluid temperature. Caution must be taken to avoid loss of resin through the top of the vessel by over expansion of the bed.

PRESSURE DROP ACROSS RESIN BED



BACKWASH EXPANSION OF RESIN BED



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