PRODUCT DATA SHEET

Purolite® A103SPlus

Polystyrenic Macroporous, Weak Base Anion Resin, Free Base form, Sweetener Grade

PRINCIPAL APPLICATIONS

- Demineralization - Sugar solutions
- Decolorization - Sugar Solutions

ADVANTAGES

- High operating capacity
- Superior elution efficiency of organics during regeneration
- Excellent resistance to osmotic shock
- Physically resistant to mechanical breakage
- Good rinse characteristics

REGULATORY APPROVALS

- Kosher Certified
- Compliant with FDA Regulation 21 CFR 173.25 for Food Treatment, Ion Exchangers
- LPPOM MUI Halal Certified

TYPICAL PACKAGING

- 1 ft³ Sack
- 25 L Sack
- 5 ft³ Drum (Fiber)
- 1 m³ Supersack
- 42 ft³ Supersack
- Bulk Tanker (NA only)

TYPICAL PHYSICAL & CHEMICAL CHARACTERISTICS:

Polymer Structure	Macroporous polystyrene crosslinked with divinylbenzene
Appearance	Spherical Beads
Functional Group	Tertiary Amine
Ionic Form	FB
Total Capacity (min.)	1.5 eq/L (32.8 Kgr/ft³) (FB form)
SBC	12 - 20 %
Moisture Retention	51 - 58 % (Cl^- form)
Particle Size Range	425 - 1200 µm
< 425 µm (max.)	2 %
Uniformity Coefficient (max.)	1.6
Reversible Swelling, FB → Cl^- (max.)	25 %
Specific Gravity	1.04
Shipping Weight (approx.)	645 - 675 g/L (40.3 - 42.2 lb/ft³)
Temperature Limit	100 °C (212.0 °F) (Cl^- form)
Temperature Limit	60 °C (140.0 °F) (FB form)

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Hydraulic Characteristics

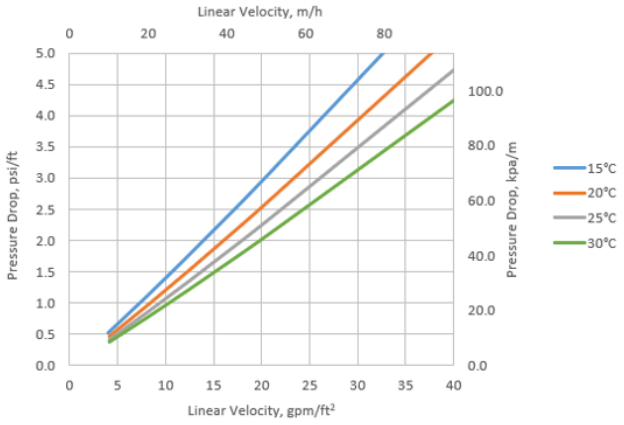
PRESSURE DROP

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.

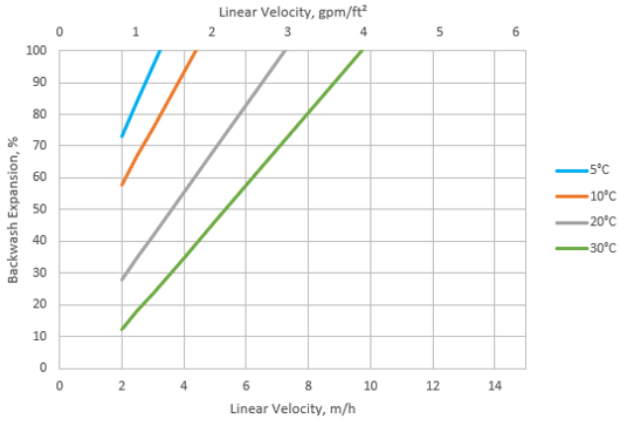
BACKWASH

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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