

# Purolite® A500CPlus

Polystyrenic Macroporous, Type I  
Strong Base Anion Resin, Chloride  
form

## PRINCIPAL APPLICATIONS

- Demineralization

## ADVANTAGES

- High operating capacity
- High flow rates

## TYPICAL PACKAGING

- 1 ft<sup>3</sup> Sack
- 25 L Sack
- 5 ft<sup>3</sup> Drum (Fiber)
- 1 m<sup>3</sup> Supersack
- 42 ft<sup>3</sup> Supersack

## TYPICAL PHYSICAL & CHEMICAL CHARACTERISTICS:

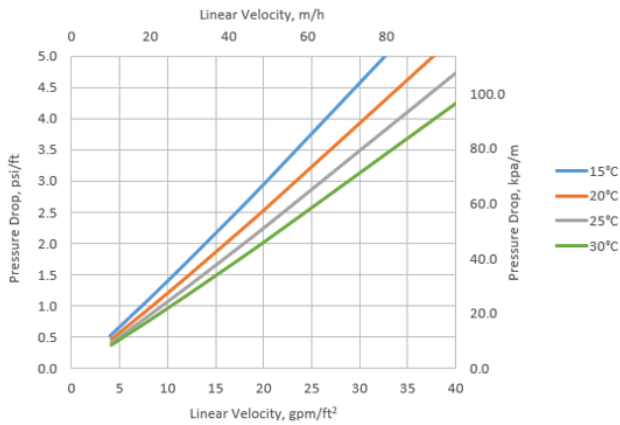
Polymer Structure	Macroporous polystyrene crosslinked with divinylbenzene
Appearance	Spherical Beads
Functional Group	Type I Quaternary Ammonium
Ionic Form	Cl <sup>-</sup> form
Total Capacity (min.)	1.15 eq/L (25.1 Kgr/ft <sup>3</sup> ) (Cl <sup>-</sup> form)
Moisture Retention	57 - 63 % (Cl <sup>-</sup> form)
Particle Size Range	425 - 1200 µm
< 425 µm (max.)	2 %
Uniformity Coefficient (max.)	1.6
Reversible Swelling, Cl <sup>-</sup> → OH <sup>-</sup> (max.)	20 %
Specific Gravity	1.08
Shipping Weight (approx.)	670 - 700 g/L (41.9 - 43.8 lb/ft <sup>3</sup> )
Temperature Limit	100 °C (212.0 °F) (Cl <sup>-</sup> form)
Temperature Limit	65 °C (149.0 °F) (OH <sup>-</sup> form)

# 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.

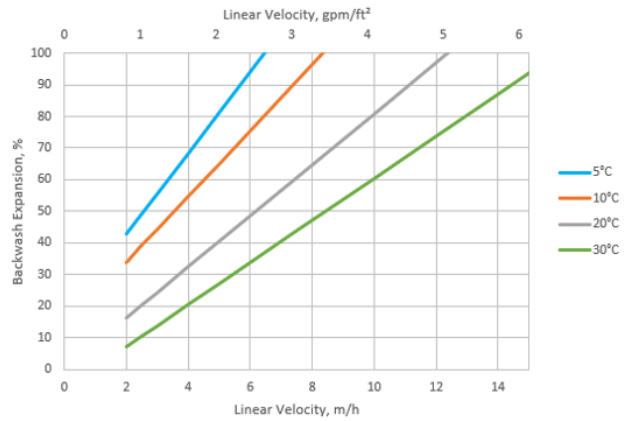
### PRESSURE DROP ACROSS RESIN BED



## 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.

### BACKWASH EXPANSION OF RESIN BED





Algeria  
Australia  
Bahrain  
Brazil  
Canada  
China  
Czech Republic  
France  
Germany

India  
Indonesia  
Israel  
Italy  
Japan  
Jordan  
Kazakhstan  
Korea  
Malaysia

Mexico  
Morocco  
New Zealand  
Poland  
Romania  
Russia  
Singapore  
Slovak Republic  
South Africa

Spain  
Taiwan  
Tunisia  
Turkey  
UK  
Ukraine  
USA  
Uzbekistan



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