

# Purolite® A520E

Polystyrenic Macroporous,  
Quaternary Ammonium Strong Base  
Anion Resin, Chloride form, Potable  
Water Grade

## PRINCIPAL APPLICATIONS

- Nitrate Removal

## REGULATORY APPROVALS

- French Health Ministry Approval for Potable Water Treatment
- Kosher Certified
- Certified by the WQA to NSF/ANSI-61 Standard
- Drinking Water Inspectorate Approved for Use in Public Water Supply in the UK
- Water Regulations Advisory Scheme Approved

## TYPICAL PACKAGING

- 1 ft³ Sack
- 25 L Sack
- 5 ft³ Drum (Fiber)
- 1 m³ Supersack
- 42 ft³ Supersack

## TYPICAL PHYSICAL & CHEMICAL CHARACTERISTICS:

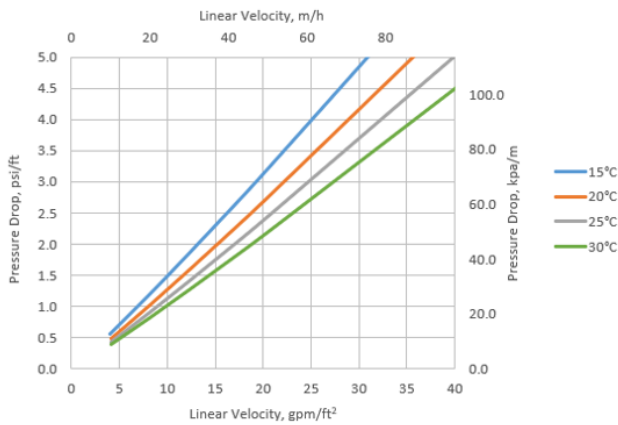
Polymer Structure	Macroporous polystyrene crosslinked with divinylbenzene
Appearance	Spherical Beads
Functional Group	Quaternary Ammonium
Ionic Form	Cl <sup>-</sup> form
Total Capacity (min.)	0.9 eq/L (19.7 Kgr/ft³) (Cl <sup>-</sup> form)
Moisture Retention	49 - 56 % (Cl <sup>-</sup> form)
Particle Size Range	300 - 1200 µm
< 300 µm (max.)	1 %
Uniformity Coefficient (max.)	1.7
Specific Gravity	1.07
Shipping Weight (approx.)	675 - 705 g/L (42.2 - 44.1 lb/ft³)
Temperature Limit	100 °C (212.0 °F) (Cl <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.

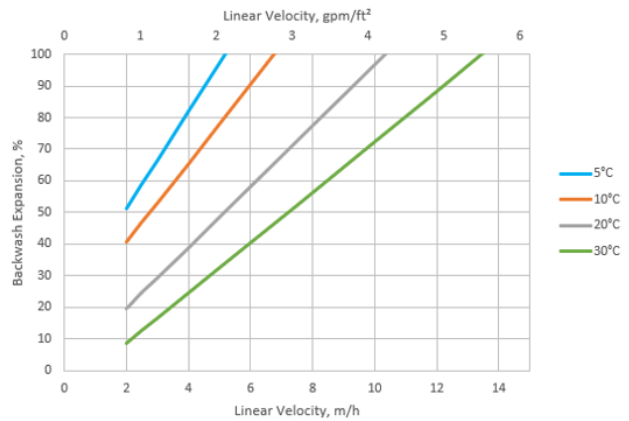
### PRESSURE DROP ACROSS RESIN BED



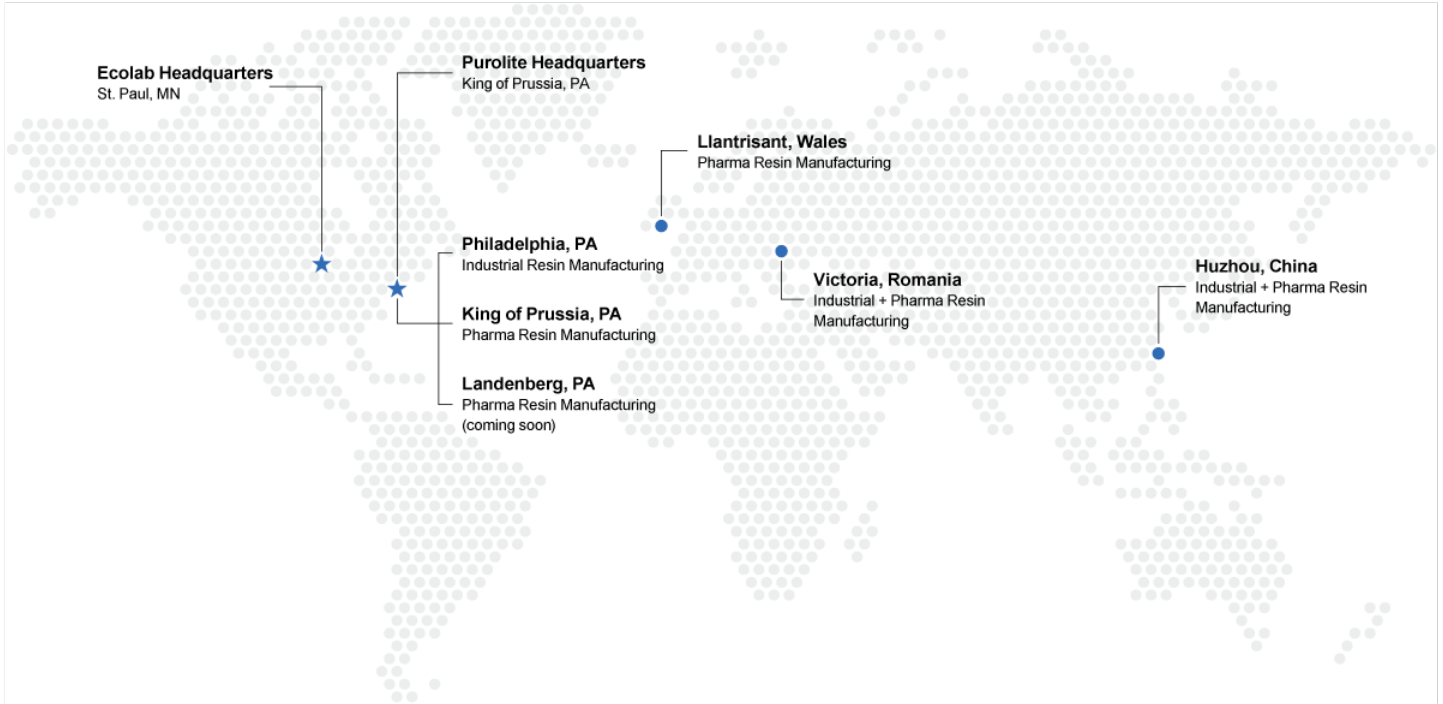
## BACKWASH

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



Purolite, an Ecolab company, is a leading manufacturer of quality ion exchange, catalyst, adsorbent and specialty high-performance resins with global sales support.



## We're ready to solve your process challenges.

For further information on Purolite products and services, visit [www.purolite.com](http://www.purolite.com) or contact us at the addresses below.

**Americas**  
[americas@purolite.com](mailto:americas@purolite.com)

**Asia Pacific**  
[asiapacific@purolite.com](mailto:asiapacific@purolite.com)

**EMEA**  
[emea@purolite.com](mailto:emea@purolite.com)

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, Purolite expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.