

# Purolite® A105

Polystyrenic Macroporous, Weak  
Base Anion Resin, Free Base form

## PRINCIPAL APPLICATIONS

- Demineralization
- Natural-Organic-Matter-(NOM)-Removal

## ADVANTAGES

- Capacity for the removal of high molecular weight organic materials
- Excellent protection from organic fouling
- Excellent mechanical, osmotic, and chemical stability

## 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
- 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	1.1 eq/L (24.0 Kgr/ft <sup>3</sup> ) (FB form)
SBC	10 - 20 %
Moisture Retention	58 - 65 % (Cl <sup>-</sup> form)
Particle Size Range	300 - 1200 µm
< 300 µm (max.)	1 %
Uniformity Coefficient (max.)	1.7
Reversible Swelling, FB → Cl <sup>-</sup> (max.)	25 %
Specific Gravity	1.02
Shipping Weight (approx.)	645 - 675 g/L (40.3 - 42.2 lb/ft <sup>3</sup> )
Temperature Limit	100 °C (212.0 °F) (Cl <sup>-</sup> form)
Temperature Limit	60 °C (140.0 °F) (FB form)
Particle Size Range	300 - 1200 µm



**Americas**  
T +1 610 668 9090  
F +1 610 668 8139  
americas@purolite.com

**EMEA**  
T +44 1443 229334  
F +44 1443 227073  
europe@purolite.com

**Asia Pacific**  
T +86 571 876 31382  
F +86 571 876 31385  
asiapacific@purolite.com

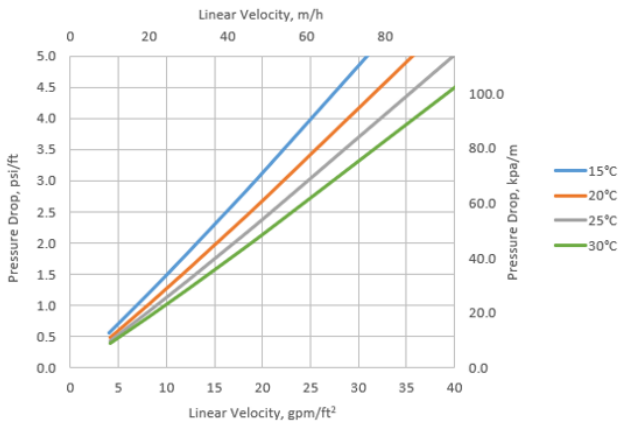
**FSU**  
T +7 495 363 5056  
F +7 495 564 8121  
fsu@purolite.com

# 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.

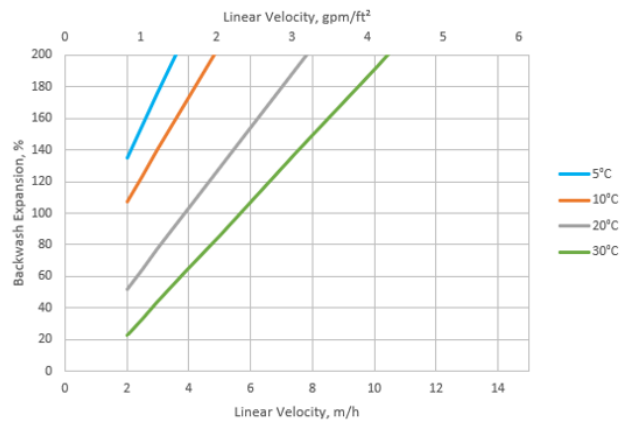
### PRESSURE DROP ACROSS RESIN BED



## 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



**Americas**  
 T +1 610 668 9090  
 F +1 610 668 8139  
 americas@purolite.com

**EMEA**  
 T +44 1443 229334  
 F +44 1443 227073  
 europe@purolite.com

**Asia Pacific**  
 T +86 571 876 31382  
 F +86 571 876 31385  
 asiapacific@purolite.com

**FSU**  
 T +7 495 363 5056  
 F +7 495 564 8121  
 fsu@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.



**Americas**

T +1 610 668 9090  
F +1 610 668 8139  
americas@purolite.com

**EMEA**

T +44 1443 229334  
F +44 1443 227073  
europe@purolite.com

**Asia Pacific**

T +86 571 876 31382  
F +86 571 876 31385  
asiapacific@purolite.com

**FSU**

T +7 495 363 5056  
F +7 495 564 8121  
fsu@purolite.com