

## PRODUCT DATA SHEET

# Purofine® PFA400

Polystyrenic Gel, Type I Strong Base  
Anion Resin, Chloride form, Uniform  
Particle Size

## PRINCIPAL APPLICATIONS

- Demineralization - Industrial Water

## ADVANTAGES

- High operating capacity
- Good resistance to organic fouling
- Efficient regeneration

## REGULATORY APPROVALS

- IFANCA Halal Certified
- Kosher Certified
- Certified by the WQA to NSF/ANSI-61 Standard

## 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:

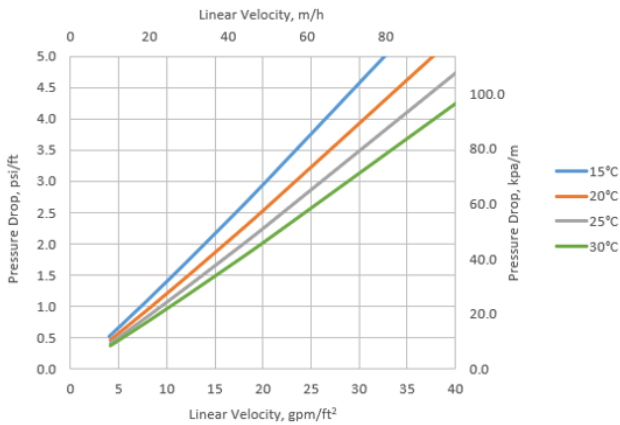
Polymer Structure	Gel polystyrene crosslinked with divinylbenzene
Appearance	Spherical Beads
Functional Group	Type I Quaternary Ammonium
Ionic Form	Cl <sup>-</sup> form
Total Capacity (min.)	1.3 eq/L (28.4 Kgr/ft <sup>3</sup> ) (Cl <sup>-</sup> form)
Moisture Retention	48 - 54 % (Cl <sup>-</sup> form)
Mean Diameter	570 ± 50 µm
Uniformity Coefficient	1.1 - 1.2
Reversible Swelling, Cl <sup>-</sup> → OH <sup>-</sup> (max.)	30 %
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	60 °C (140.0 °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.

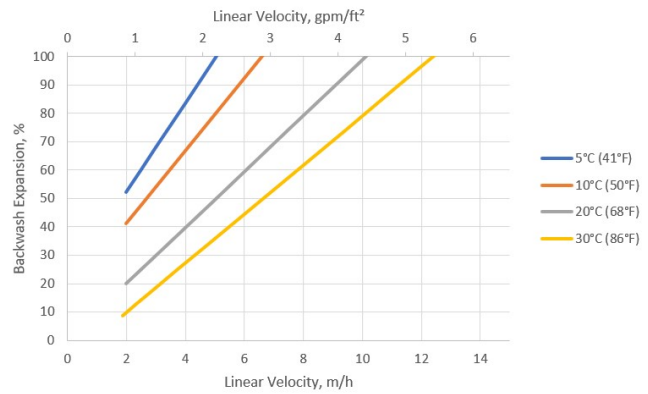
### PRESSURE DROP ACROSS RESIN BED



## 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



---

#### Americas

Purolite Corporation  
2201 Renaissance Blvd.  
King of Prussia, PA 19406  
T +1 800 343 1500  
T +1 610 668 9090  
F +1 800 260 1065  
americas@purolite.com

#### EMEA

Purolite Ltd.  
Unit D  
Llantrisant Business Park  
Llantrisant, Wales, UK  
CF72 8LF  
T +44 1443 229334  
F +44 1443 227073  
emea@purolite.com

#### FSU

Purolite Ltd.  
Office 6-1  
36 Lyusinovskaya Str.  
Moscow, Russia  
115093  
T +7 495 363 5056  
F +7 495 564 8121  
fsu@purolite.com

#### Asia Pacific

Purolite China Co. Ltd.  
Room 707, C Section  
Huanglong Century Plaza  
No.3 Hangda Road  
Hangzhou, Zhejiang, China 310007  
T +86 571 876 31382  
F +86 571 876 31385  
asiapacific@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.

