

Purolex PRC 107 E

Strong Acid cation exchange resin, gel structure

1. Indexes of Physical and Chemical Properties:

Designation	Purolex PRC 107 E
Appearance	light yellow to brown
Ionic Form Supplied	Na form
Volume Exchange Capacity, meq/ml	1,9 min
Water Retention, %	45 – 50
Bulk Density, g/ml	0,77-0,87
Specific Density, g/ml	1,25 - 1,29
Particle Size, %	(0,4 – 1,25) mm ≥ 95
Homogeneous Coefficient	≤ 1,70 max
Spherical after Attrition % ≥	90 min

2. Reference Indexes for Operation:

pH Range:	0-14
Max. Operating Temp, °C:	H ⁺ ≤ 100°C Na ⁺ ≤ 120°C
Total Reversible Swelling, %:	(Na ⁺ → H ⁺) 8-10
Concentration of Regenerate Solution, %	NaCl: 8-10; HCl: 4-5
Consumption of Regenerate:	
	NaCl(8-10%) Vol. Resin Vol. = 1.5-2:1
	HCl(4-5%) Vol. Resin Vol. = 2-3:1
Flow Rate of Regenerate Solution, m/hr:	4-6
Regenerate Contact time, minute:	30-60
Rinse Flow Rate, m/hr:	10-20
Rinse Time, approx:	30
Operating Flow Rate, m/hr:	10-45

3. Application:

Domestic gel type standard. Suitable for softening and demineralization.

4. Hydraulic Characteristics:

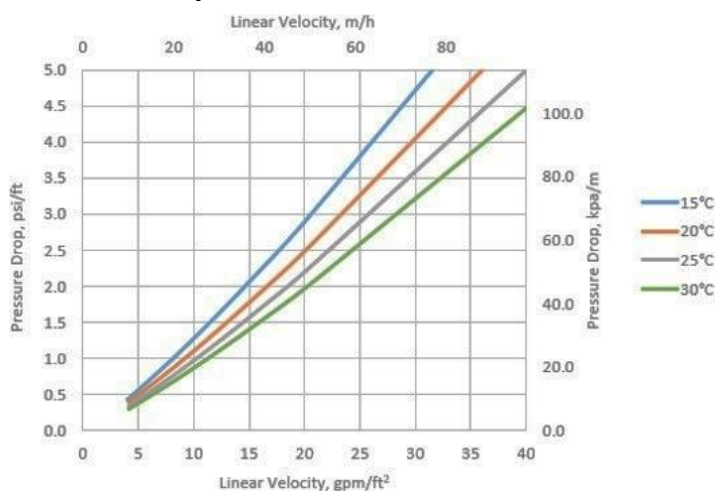
Pressure Drop

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.

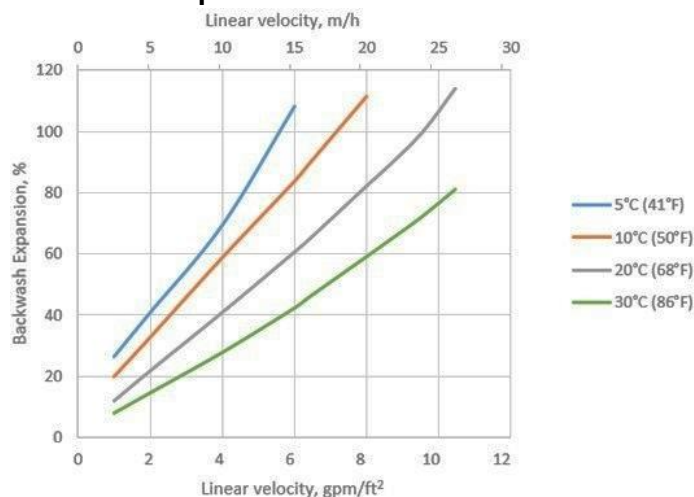
Backwash Expansion

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



Backwash Expansion



5. Packing:



25 liters polyethylene valve bags

