

Food Grade Ion Exchange Resin PristineFlow 001x7 FG

PristineFlow 001x07FG is a polystyrene-divinylbenzene sulfonated copolymer cation exchanger in the form of spherical particles, featuring high exchange capacity and fully ready for use. The cation exchanger removes hardness ions, such as calcium and magnesium, from water by replacing them with sodium ions. Once the resin layer's capacity is exhausted and hardness ions start breaking through, the resin's exchange capacity should be restored using a salt solution. The restored capacity largely depends on the amount of salt used during regeneration. PristineFlow 001x7FG can be used in water treatment systems for demineralization, for which it should be converted to the H⁺ form using a solution of hydrochloric or sulfuric acid.



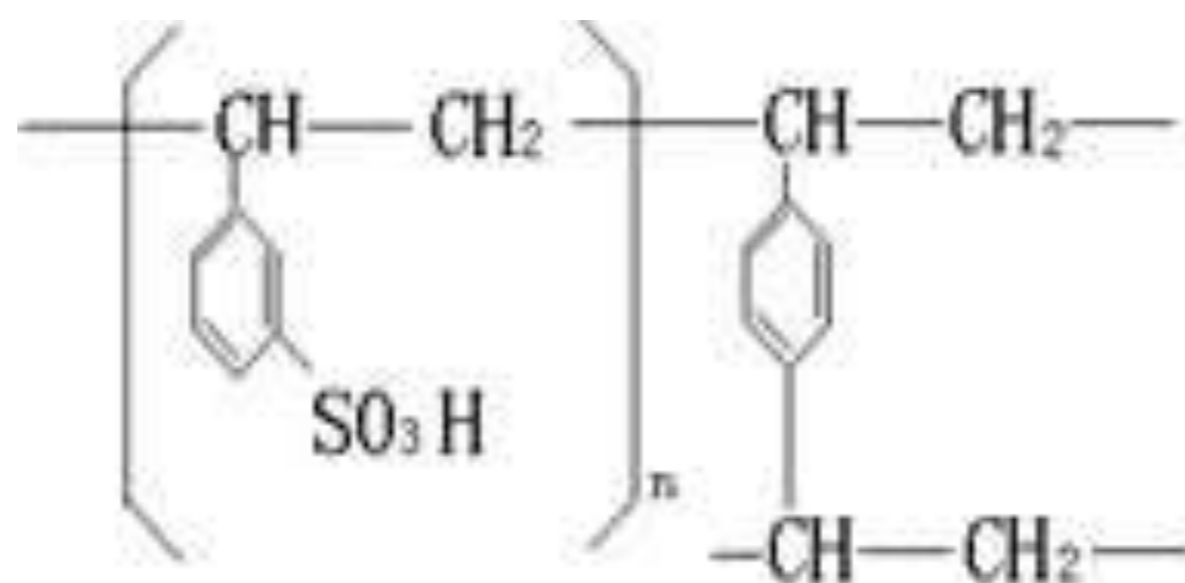
Typical Physical & Chemical Characteristics

Polymer Matrix Structure	Crosslinked Polystyrene Divinylbenzene
Functional Group	R-SO ₃ H
Ionic Form, as shipped	Sodium (Na ⁺)
Physical Form and Appearance	Clear Spherical Beads
Sphericity	95% min.
Screen Size Range --- U.S. Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range 0.315-0.6mm	≥ 95%
Uniformity Coefficient	≤1,6 max.
Water Retention, Na ⁺ form	42 ÷ 48%
Swelling Na ⁺ → H ⁺ Ca ²⁺ → Na ⁺	8% max. 4% max.
Shipping Weight, Na ⁺ form	820 ÷ 860 g/l
Total Exchange Capacity, Na ⁺ form	1,9 eq/l min.
pH Range	0 ÷ 14

Suggested Operating Conditions

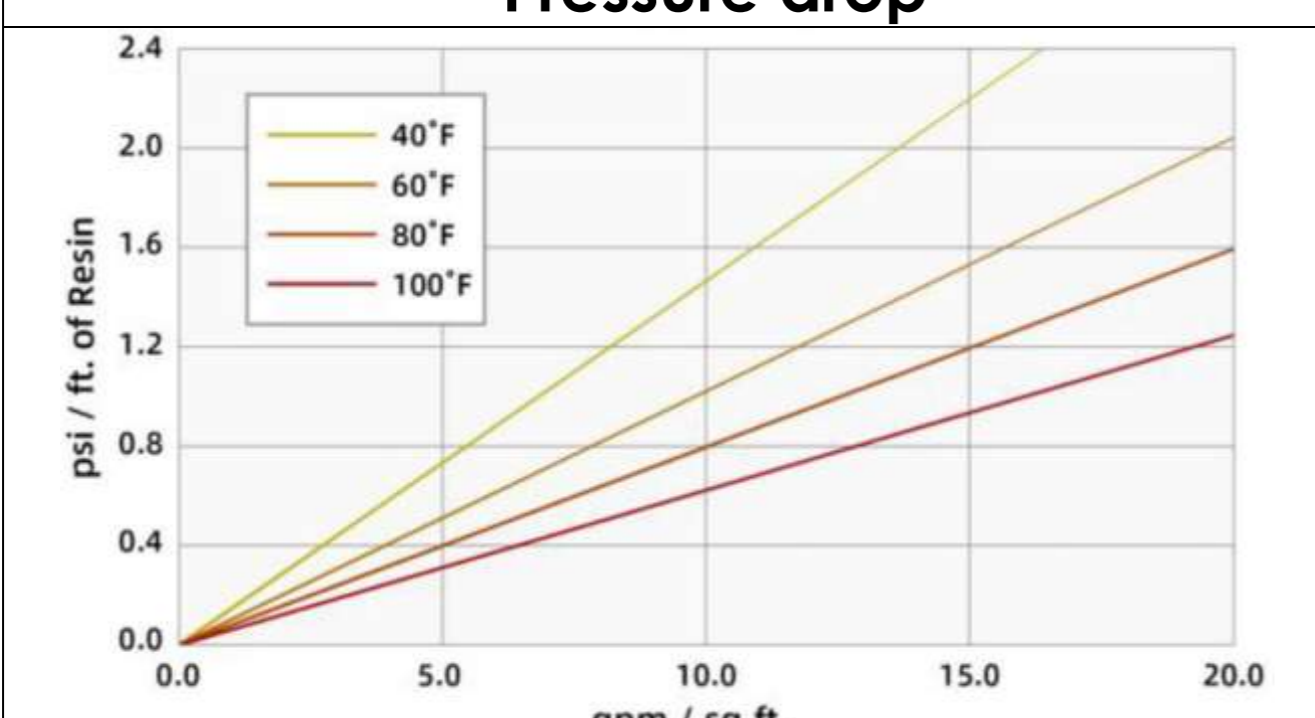
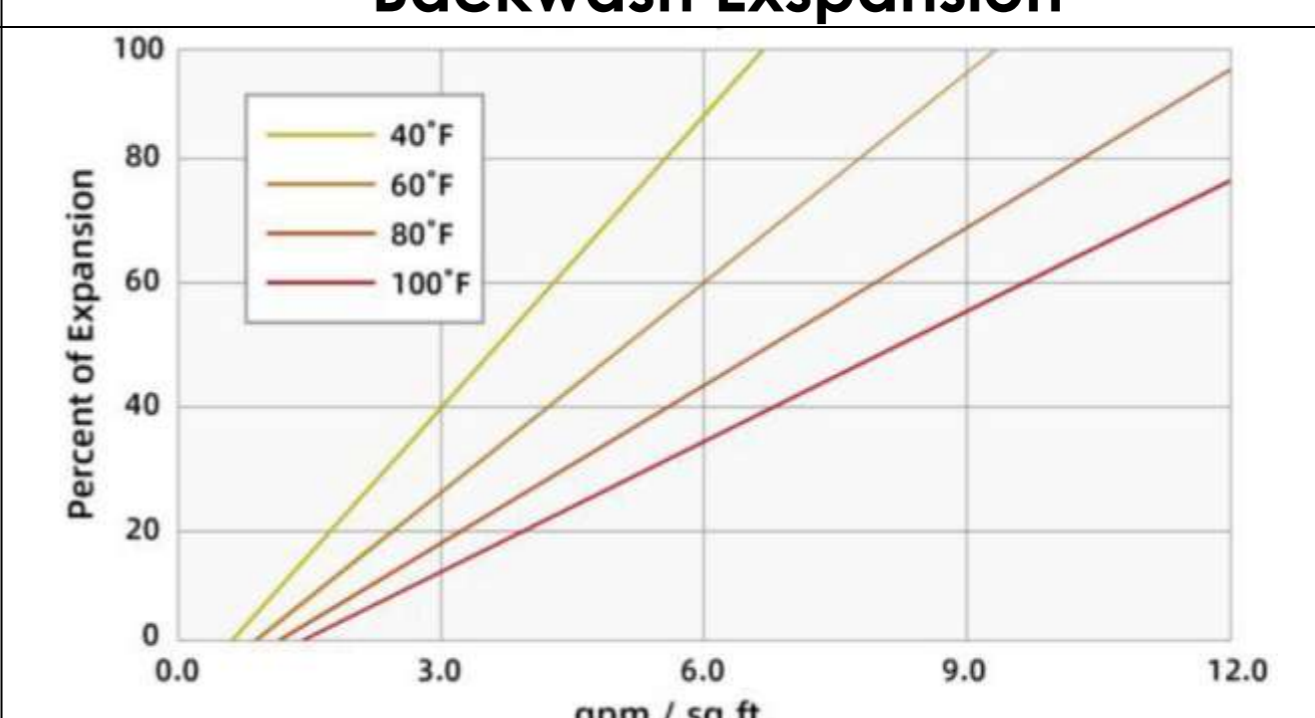
Service Flow Rate	8 ÷ 50 m/h
Backwash Rate	8 ÷ 13 m/h for 25 ÷ 50% bed expansion
Regeneration Regenerant Concentration Flow Rate Contact Time	8 ÷ 15% NaCl or saturated salt water 2 ÷ 10 m/h no less 30 Min.
Displacement Rinse Rate	2 ÷ 10 m/h
Displacement Rinse Volume	1 ÷ 2 part of risen
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Volume	8 ÷ 25 m/h
Maximum Temperature Na ⁺ form	120°C (248°F) max.
Minimum Bed Depth	0,6 m (24 inches)

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Application

The **PristineFlow 001x7FG** ion exchange resin is used in both domestic and industrial drinking water treatment systems to remove hardness salts (calcium and magnesium) that form white residue and scale on heating devices. Additionally, PristineFlow 001x7FG can be used in water treatment systems for demineralization (desalination), for which it must be converted into the H⁺ form using a solution of hydrochloric or sulfuric acid.

Hydraulic Properties	
Pressure drop	Backwash Expansion
 <p>The graph above shows the expected pressure loss of resin per foot of bed depth as a function of flow rate at various temperatures.</p>	 <p>The graph above shows the expansion characteristics of resin as a function of flow rate at various temperatures.</p>

Transportation and Storage Conditions

Packaging: 25 liters.

Store and transport at temperatures above 0°C, protecting from freezing. Transported on pallets containing 50 packages each.