

## USF NR-1 CATION RESIN

### Description:

USF NR-1 is a premium grade, 8% cross-linked gel, strong acid cation resin in bead form. The resin has a high exchange capacity, excellent stability at elevated temperatures, and good chemical resistance over a wide pH range. This resin is typically used in deionization and chemical processing applications.

### Chemical Properties

Ionic Form (as shipped)	Hydrogen
Moisture Content	50 - 55% (H form)
Exchange Capacity	1.8 meq / ml minimum (H form)
Conversion to Hydrogen Form	99% minimum
Kinetics	> 17 megohm (Siemens Kinetics Test)

### Physical Properties

Particle Screen Sizing	
+ 16 Mesh	5% maximum
- 50 Mesh	0.5% maximum
Friability Average	200 grams/bead minimum
Whole Beads (%)	90 minimum
Shipping Weight	50 lbs. / cu. ft.

### Operating Conditions

Operating pH Range	1 to 14
Demineralization	1-6 GPM/ft <sup>2</sup>
Condensate Polishing	1-65 GPM/ft <sup>2</sup> (dependent on operating conditions and performance expectations)
Regenerant Flow Rate	
HCl	0.5 to 1.0 gpm / cu. ft.
H <sub>2</sub> SO <sub>4</sub>	0.5 to 2.0 gpm / cu. ft.
Rinse Flow Rate	0.5 to 1.5 gpm / cu. ft.
Rinse Volume	40 to 75 gallons / cu. ft.
Maximum Operating Temperature	250°F