

## USF NR-35LC NUCLEAR GRADE MIXED BED RESIN

### Description:

USF NR-35LC is a 2:1 equivalent mix of USF C-381 H and NR-2LC. USF C-381 H is a macroporous hydrogen form strong acid cation exchange resin that is manufactured from polystyrene and is cross-linked with divinylbenzene. USF NR-2LC OH is a Type I strong base gel anion resin consisting of a styrene divinylbenzene matrix with an amber color.

### Chemical Properties

Functional Groups	Sulfonic Acid, Trimethylamine
Ionic Form (as shipped)	Hydrogen / Hydroxide mix
Moisture Content	56% max. (H form cation) / 60% max. (OH form anion)
Exchange Capacity	1.65 meq / ml min. (H form cation) / 1.1 meq / ml min. (OH form anion)
Kinetics	> 17 megohm (Siemens Kinetics Test)
Conversion:	
Cation	99% minimum (H form)
Anion	94% minimum (OH form)
Impurities:	
Chloride (Cl)	≤ 0.1%
Sulfate (SO <sub>4</sub> )	≤ 0.5%
Friability	
Average	≥ 350 gm / bead
% > 200	95%

### Physical Properties

Particle Screen Sizing	
+ 16 Mesh	5% maximum
- 50 Mesh	0.5% maximum
Effective Size (Approximate)	0.40 - 0.60 mm
Whole Beads (%)	95 minimum
Shipping Weight	47 lbs. / cu. ft.

### Operating Conditions

Operating pH Range	1 to 14
Service Flow Rate	1 to 4 gpm / cu. ft.
Regenerant Flow Rate	0.5 gpm / cu. ft.
Rinse Flow Rate	0.5 to 2.0 gpm / cu. ft.
Rinse Volume	50 gallons / cu. ft. (approximate)
Maximum Operating Temperature	140°F