

USF C-271 CATION RESIN

Description:

USF C-271 is a weak acid macroporous cation exchange resin consisting of an acrylic polymer matrix functionalized with carboxylic acid supplied in the hydrogen 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 and will only exchange cations associated with alkalinity.

Chemical Properties

Functional Group	Carboxylic Acid
Ionic Form (as shipped)	Hydrogen
Moisture Content	52 - 58% (H form)
Exchange Capacity	3.0 meq / ml minimum (H form)
Conversion to Hydrogen Form	99% minimum

Physical Properties

Particle Screen Sizing	
+16 Mesh	5% maximum
-50 Mesh	1% maximum
Percent Swelling -- H to Ca	15 - 20%
Whole Beads (%)	90 minimum
Shipping Weight	47 lbs. / cu. ft.

Operating Conditions

Operating pH Range	1 to 14
Service Flow Rate	1 to 5 gpm / ft ³
Backwash Rate	3 to 5 gpm / ft ³
Regenerant Flow Rate	
HCl	0.5 to 1.0 gpm / cu. ft.
H ₂ SO ₄	0.5 to 2.5 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