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NM-72/HP

IONAC[®] HIGH PURITY MIXED BED ION EXCHANGE RESIN

Ionac NM-72/HP is a high capacity mixed bed ion exchange resin consisting of a 2:1 by volume mixture of a Type II strong base anion exchange resin and a strong acid cation exchange resin. Ionac NM-72/HP is manufactured with a closely controlled particle size (screen) distribution, then specially purified and converted to better than 90 percent of its regenerated form to insure that Ionac NM-72/HP yields a high purity water quality.

APPLICATIONS:

- Manufacturing and process industries that require high purity water for product cleansing or process streams.
- Electronics industry in the production of high purity water for product semiconductors and electronic components.
- Pharmaceutical industry in the production of high purity water for process streams.
- Laboratory systems in the production of high purity water for analytical purposes.

General Purchasing Specifications

Ionac NM-72/HP

Physical Form:

Spherical Beads

Polymer Structure:

Cation: R-SO₃-H⁺ (Hydrogen Form Sulfonated Styrene Divinylbenzene Copolymer)

Anion: R-(CH₃)₂-(CH₂)₂-N⁺OH (Hydroxyl Form Dimethylethanolamine Styrene Divinylbenzene Copolymer)

Ionic Form as Shipped:

H⁺/OH

Moisture Content as Shipped (%)

55 Maximum

Shipping Weight.

43 lbs./cf (688 g/l)

Standard Packing:

7 cf Polyethylene Lined Fiber Drums or
1 cf Bags

Engineering and Chemical Properties

Ionac NM-72/HP

Column Capacity (meq/ml):	0.5 Min. to a Resistivity Endpoint of 20,000 Ohm-cm
Column Capacity (Kgr/cf):	11.0 Min. to a Resistivity Endpoint of 20,000 Ohm-cm
Volume Ratio (Approximate):	2.0 Parts Strong Base Anion, Type II 1.0 Parts Strong Acid Cation
Screen Size Range (US Mesh Size):	+16/-50
Particle Size Distribution:	5% Max. +16 Mesh 1% Max. -50 Mesh
Uniformity Coefficient, Max.:	1.6
Effective Size (mm):	0.4 - 0.6
Percent Conversion to Ionic Form:	Hydrogen 95% Minimum Hydroxide 90% Minimum Chloride 4% Maximum Sulfate + Carbonate 6% Maximum

Recommended Process Design Parameters

Operating Temperature, Max.:	95°F (35°C)
Bed Depth, Min.:	30 in. (76 cm)
Freeboard (Rising Space):	100%
Service Flowrate:	5 - 7 gpm/sq. ft. (12 - 17 m/hr)
Backwash Expansion, Min.:	50%
Regenerant Percent Concentration:	HCl 1 - 6%
Cation:	H ₂ SO ₄ 1 - 4%
Anion:	NaOH 4 - 6%
Regeneration Flowrate:	0.25 - 1.0 gpm/cf (2 - 81/hr/l)
Regeneration Injection Time:	Cation: 25 - 40 minutes Anion: 45 - 60 minutes
Displacement Rinse Volume (Min.):	1 Bed Volume
Displacement Rinse Flowrate:	0.25 - 1.0 gpm/cf (2 - 81/hr/l)
Fast Rinse Volume (Min.):	7 Bed Volume
Fast Rinse Flowrate:	Service Flowrate

Maximum Influent Limitations

Free Chlorine (mg/l):	Less Than 0.05
Turbidity (NTU):	Less Than 1.00
Heavy Metals (mg/l):	Less Than 0.10

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