GENERAL TECHNOLOGIES, SPC
- High-Quality Services & Products

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PCR-H Ion Exchange Resin
High Purity Strongly Acidic

Product Description

PCR-H is a high-purity powdered strong acidic cation exchange resin. It's designed for high-flow, pre-coat condensate polishing demineralizers for utility power plant applications, as well as for other commercial or industrial water demineralizer treatment systems.

The product provides very high exchange capacity, high purity level and low impurity content level of treated water.

PCR-H 's particle size is 30-150µm which provides large surface area. This is an advantage that permits much better kinetics performance of excellent exchange efficiency and filtration ability.

Typical Physical, Chemical & Operating Characteristics

ITEMS		DATA
Matrix		Powdered Polystyrene-DVB
Physical Form & Color		Powerded, light yellow
Functional Group		$R\text{-}SO_3^-$
Ionic Form		H^+
Total Exchange Capacity mmol/g		≥4.80
Shipping Weight g/ml		0.5-0.7
Moisture Contents %		<50
Conversion to Ionic Form H^+%		≥99.0
Performance		**Powder**
Particle Size		30-150 µm %
	>200 µm %	≥95.0
	<10 µm %	≤2.0

Chemical and Thermal Stability

PCR-H resin is insoluble in dilute or moderately concentrated acids, alkalies, and in all common solvents. However, exposure to >0.1 ppm of free chlorine, “hypochlorite” ions, or other strong oxidizing agents over long periods of time will eventually break down the crosslinking. Temperature over 30 ^{o}C (85 ^{o}F) will accelerate the oxidation.

This will tend to increase the moisture retention of the resin, decreasing it s mechanical strength, as well as generating small amounts of extractable breakdown products. Like all conventional Polystyrene sulfonated resins, it is thermally stable to higher than 150 ^{o}C (300 ^{o}F) in the alkali (for instance, sodium) or alkaline earth (calcium and magnesium) salt forms. The free acid form tends to hydrolyze in water temperatures appreciably higher than 120 ^{o}C (250 ^{o}F) thereby losing capacity, as the functional groups are gradually replaced by hydroxyl groups.