IMAC™ HP333

Weak Acid Cation Exchange Resin

Introduction

IMAC HP333 is a weak acid cation exchange resin containing carboxylic groups on an acrylic matrix. It combines a high exchange capacity with a smaller volume variation than conventional carboxylic resins.

IMAC HP333 is designed for cartridge applications where temporary hardness(1) is removed from tap water for use in cooking or making tea and coffee. It also removes heavy metals(1) and is widely used to improve the taste of water.
IMAC HP resins are manufactured especially for the nutrition industry and for potable water treatment.
IMAC HP333 is tested and certified against NSF/ANSI Standard 42 for material requirements only.

(1) Not performance tested or certified by a third party certifying body

Properties

Matrix	Polyacrylic
Functional groups	$-COO^-$
Physical form	Opaque beads
Ionic form as shipped	H^+
Total exchange capacity	≥ 3.85 eq/L (H^+ form)
Moisture holding capacity	52 to 58 % (H^+ form)
Specific gravity	1.140 to 1.180 (H^+ form)
Shipping weight	685 g/L
Uniformity coefficient	≤ 1.9
Harmonic mean size	0.500 – 0.700 mm
Fine contents	< 0.300 mm : 0.5 % max < 0.400 mm : 10.0 % max
Coarse beads	> 1.180 mm : 3.0 % max

Performance

IMAC HP333 will remove temporary hardness (bicarbonate alkalinity) from over 450 bedvolumes of tap water having 5 meq/L alkalinity (250 ppm as CaCO3) and from 1100 bedvolumes having 2 meq/L alkalinity (100 ppm as CaCO3). These volumes are indicated for an alkalinity leakage end point of 50 %.

Quality control

All Imac HP resins are manufactured and purified specially for use in non industrial applications. Every batch of IMAC HP333 is analysed to ensure its compliance with high purity specifications, in particular :

- Physical and chemical properties,
- Individual release of certain substances in the treated water,
- Global release of organic substances expressed in TOC (Total Organic Carbon),
- Total microbial count.

Conditioning

IMAC HP333 is ready to use* : when using a new cartridge for the first time, IMAC HP333 will comply with regulations after being rinsed with 20 bedvolumes of water i.e. two litres of water for a cartridge containing 100 ml of resin. These first two litres can be used for watering flower pots or discarded. Users will need to make no other treatment whatsoever. Appropriate cartridge design will have to take care of maintaining the resin in a moist state and also of keeping contamination under control.

* This is valid only if :

1. the resin is stored at a temperature of less than 25°C and protected from UV radiations,
2. the storage time between production date (printed on the bags) and final use does not exceed 6 months.

For more information about DOW™ resins, call the Dow Water & Process Solutions business:

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Form No. 177-03036-0313