



AMBERLITE™ XAD™16HP N

Polymeric Adsorbent

Introduction

AMBERLITE XAD16HP N is a polymeric adsorbent available in the form of white insoluble beads, supplied in the fully hydrated form. This resin has been prepared to meet high purity specifications. It is a non ionic, hydrophobic, cross-linked polystyrene copolymer, characterised by its unique macro reticular porosity, controlled pore size distribution and high surface area. AMBERLITE XAD16HP N has excellent physical resistance and thermal stability. In addition, it has a low swelling between solvent and aqueous media and can be used in column or batch operations.

Properties

Matrix	Macroporous cross-linked polymer
Physical form	White beads
Moisture holding capacity	62 to 70 %
Shipping weight	675 g/L
Specific gravity	1.015 to 1.025
Particle Size	
Harmonic mean size	0.600 - 0.750 mm
Uniformity coefficient	≤ 2.0
Fines content	< 0.300 mm : 3.0 % max
Coarse beads	> 1.18 mm : 5.0 % max.
Surface area	≥ 800 m ² /g
Porosity	≥ 0.6 ml/ml

Suggested Operating Conditions

Maximum operating temperature	150°C
Minimum bed depth	700 mm
Flow rate	5 to 40 BV*/h
Loading step usually	2 to 16 BV*/h
Washing step	1 to 2 BV/h
Regeneration step	1 to 2 BV/h
Rinse step	2 to 16 BV/h
Regenerants	Methanol or other water miscible organic solvents (ethanol, acetone, Isopropanol, etc.) Dilute bases for weakly acidic compounds Dilute acids for weakly basic compounds Water where adsorption is from an ionic solution Hot water or steam for volatile materials
Backwash	Backwashing with water at 1 m/h and 15°C will produce a bed expansion of 70 %.

* BV (Bed Volume) = 1 m³ solution per m³ resin

Food processing

AMBERLITE XAD16HP N meets the requirements of FDA 21 CFR 173.65 for removal of organic substances from aqueous foods except carbonated beverages. It can therefore be used for fruit juice decolorization and debittering and for the recovery of anthocyanins, where the FDA regulation is applicable.



As governmental regulations concerning the use of resins for food processing applications may vary from country to country, it is recommended that potential users contact Rohm and Haas in order to assess the best choice of resin and optimum operating conditions.

In general, AMBERLITE XAD16HP N is ready to use after a simple regeneration followed by a rinse with 20 bed volumes of potable water.

Other applications

In general AMBERLITE XAD16HP N is used for the adsorption of water soluble organic substances but it is not limited to this area.

AMBERLITE XAD16HP N is particularly useful in the separation and purification of antibiotics, vitamins, steroids, amino acids, enzymes, polypeptides, etc. in the pharmaceutical and organic chemical industries

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

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