PRODUCT DATA SHEET

AMBERLITE™ XAD761

Industrial Grade Ion Exchange Adsorbent

AMBERLITE™ XAD761 is a highly porous phenolic adsorbent resin in granular form, designed to remove organic impurities from solution by adsorption. Its large active surface and defined pore size distribution is achieved by a unique method of synthesis.

The phenolic hydroxyl and methylol groups of AMBERLITE XAD761 account for its hydrophilic properties.

PROPERTIES

Matrix	Crosslinked phenol-formaldehyde polycondensate
Functional groups	Principally phenol
Physical form	Ochre-coloured granules
Moisture holding capacity [1]	62 - 70 %
Shipping weight	615 g/L (38.4 lb/ft^3)
Specific gravity	1.070 to 1.130
Particle size	
Harmonic mean size	0.560 to 0.760 mm
Uniformity coefficient	≤ 1.8
Fines content [1]	< 0.300 mm : 2.0 % max
Coarse beads	> 1.180 mm : 1.0 % max
Porosity	0.95 - 1.18 ml/g
Surface area	150 - 250 m^2/g
Average pore diameter	600 Å

[1] *Contractual value*
Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

Operating pH range	Up to 8		
Maximum operating temperature	80°C (176°F) max (in neutral or acidic non oxidising media) 40°C (104°F) max (in highly alkaline media with or without oxidants)		
Service flow rate	up to 12 BV*/h (1.5 gpm/ft^3)		
Minimum bed depth	900 mm (35 inches)		
Regeneration	NaOH	HCl	H_2SO_4
Level (g/L_R)	30 to 60	20	26
Level (lb/ft^3)	1.9 to 3.8	1.25	1.6
Concentration (%)	2	0.5 to 2	0.5 to 2

** 1 BV (Bed Volume) = 1 m^3 solution per m^3 resin*

PERFORMANCE

In general high molecular weight water soluble organic compounds containing highly polar substitutes are well adsorbed by AMBERLITE™ XAD761. The degree of adsorption tends to increase with molecular weight in a given homologous series. Traube's rule may be used as a rough guide. Acids are generally more effectively adsorbed than bases and AMBERLITE XAD761 has more affinity for aromatic than aliphatic compounds. Acids and bases tend to be most completely removed when they are least ionized. Non polar compounds and neutral salts are not affected in most instances.

APPLICATIONS

Pharmaceutical applications

AMBERLITE XAD761 is useful for decolourising amino acids hydrolysates and solutions of alkaloids. It also removes bitter flavour components from proteins which have been solubilised by enzymatic hydrolysis (casein, soy).
AMBERLITE XAD761 is particularly recommended as an enzyme carrier for a wide range of enzymes such as lactase, pectinase.

Starch hydrolysates

AMBERLITE XAD761 removes colour, protein, iron complexes, tannins, hydroxymethyl furfural and other ingredients responsible for off-flavours.

Organic acids

AMBERLITE XAD761 removes colour from organic acids manufactured by fermentation (citric acid, lactic acid).

Fruit juices

AMBERLITE XAD761 improves clarity and colour uniformity of various fruit juices such as apple, grape, pineapple, date, etc. AMBERLITE XAD761 extracts and purifies anthocyanins obtained from products of the wine industry.

Glycerol

AMBERLITE XAD761 is used to enhance the effect of ion exchange resins in removing colour and odour from crude glycerol solutions.

FOOD PROCESSING

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

All our products are produced in ISO 9001 certified manufacturing facilities.

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