



AMBERLITE® XAD761

Industrial Grade Ion Exchange Adsorbent

PRODUCT DATA SHEET

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 ₂ SO 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 m³ solution per m³ 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 9002 certified manufacturing facilities.

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Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with Ion Exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with Ion Exchange Resins, consult sources knowledgeable in the handling of these materials.

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