

PRODUCT DATA SHEET

AMBERLITE™ FPA98 Cl
Food Grade Strong Base Anion Exchanger

For the Decolorization of Sucrose Solutions and Biopharmaceutical Applications

FOOD PROCESSING

AMBERLITE FPA98 Cl has been specially designed for the decolorization of highly colored (greater than 500 ICUMSA) liquid sugar syrups.

AMBERLITE FPA98 Cl can be used alone as a gross decolorization resin for highly colored sugar solutions on in combination with AMBERLITE FPA90 Cl where the latter is used as a polisher for very low color final products. This use of ion exchange based decolorization technology has proven more effective and economical than carbon or bore char based technologies for sugar solutions.

PROPERTIES AND SUGGESTED OPERATING CONDITIONS

AMBERLITE FPA98 Cl is an acrylic, macroreticular anionic exchange resin containing a quaternary amine function. The high porosity of its macroreticular structure allows excellent removal of large organic molecules from liquid sugars and other food streams.

BIOPHARMACEUTICAL PROCESSING

AMBERLITE FPA98 Cl is an excellent resin of choice for decolorization of high molecular weight organic color bodies in many bioprocessing applications such as natural product extraction and, recovery of antibiotics from fermentation broth.

In addition it exhibits all the advantages of an acrylic based matrix This product provides the pore structure so that high molecular weight organics are easily adsorbed (decolorization) while exhibiting the low organic fouling properties of an acrylic matrix.

The acrylic composition of the matrix provides excellent desorption of the organic color bodies during regeneration eliminating the fouling associated with other types of resin such as those based on crosslinked polystyrene. AMBERLITE FPA98 Cl also exhibits excellent resistance to physical breakdown by attrition and osmotic shock.

PROPERTIES

Matrix _____	Crosslinked acrylic macroreticular structure
Functional groups _____	Quaternary ammonium
Physical form _____	White opaque beads
Ionic form as shipped _____	Chloride
Total exchange capacity ^[1] _____	≥ 0.8 eq/L (Cl ⁻ form)
Moisture holding capacity ^[1] _____	66 to 72 % (Cl ⁻ form)
Shipping weight _____	720 g/L
Harmonic mean size _____	0.630 - 0.850 mm
Fine contents ^[1] _____	< 0.355 mm : 1.0 % max

^[1] Contractual value
 Test methods available upon request

SUGGESTED OPERATING CONDITIONS

Maximum operating temperature _____	80°C (Cl form)
Minimum bed depth _____	1000 mm
Service flow rate _____	2 to 4 BV*/h
Regenerant _____	NaCl (10 %) + NaOH (0.2 – 0.5 %)
Regenerant flow rate _____	2 to 4 BV/h
Regenerant level _____	160 to 240 g/L
Minimum contact time _____	60 minutes
Regenerant temperature _____	50 to 70 °C
Slow rinse _____	2 BV at 2 to 4 BV/h
Fast rinse _____	4 to 8 BV up to 12 BV/h

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

FOOD PROCESSING

As governmental regulations vary from country to country, it is recommended that potential users seek advice from their Rohm and Haas representative in order to determine the best resin choice, optimum operating and regeneration conditions.

HYDRAULIC CHARACTERISTICS

Figure 1 shows the bed expansion of AMBERLITE FPA98 Cl as a function of backwash flow rate and water temperature.

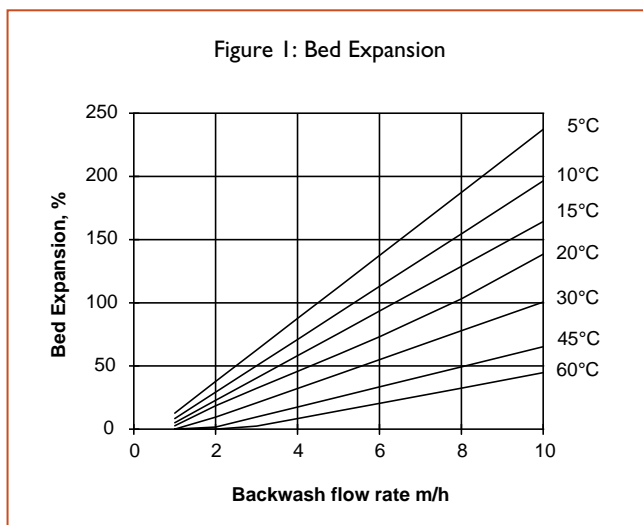
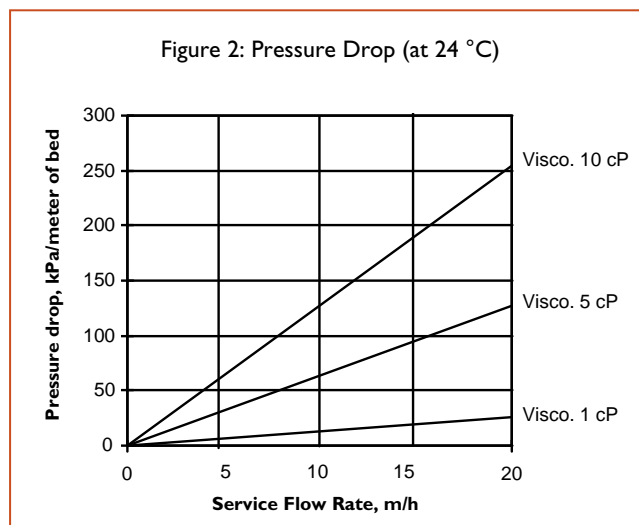


Figure 2 shows the pressure drop data for AMBERLITE FPA98 Cl as a function of service flow rate and viscosity of the solution to be treated.

Conversion Factors:

- 1 kPa/m equals 0.0442 psi/ft
- 1 m/h equals 0.41 USgpm/ft²



All our products are produced in ISO 9001 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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