PRODUCT DATA SHEET

# AMBERLITE<sup>™</sup> FPCII Na

Food Grade Strong Acid Cation Exchanger

## For the Recovery of Amino Acids such as Lysine

## FOOD PROCESSING

AMBERLITE FPC11 Na is a unique gel type, strongly acidic, cation exchange resin. This gelular matrix also provides high exchange capacity and superior resistance to fouling from fermentation products.

AMBERLITE FPC11 Na has been designed specifically for the recovery of amino acids such as lysine.

It contains sulfonic acid exchange groups on a unique polystyrene matrix. Its principal characteristics are excellent physical, chemical and thermal stability.

AMBERLITE FPC11 Na has been widely used in fixed and moving bed systems for the recovery of lysine from various feed stocks.

## PROPERTIES

Matrix	Crosslinked polystyrene
Functional groups	Sulphonates
Physical form	Amber beads
Ionic form as shipped	$\mathbf{Na}^{\scriptscriptstyle +}$
Total exchange capacity <sup>[1]</sup>	$\geq 2.05 \text{ eq/L} (\text{Na}^{+} \text{ form})$
Moisture holding capacity <sup>[1]</sup>	43 - 47 % (Na $^{\scriptscriptstyle +}$ form)
Shipping weight	$850~{ m g/L}$
Harmonic mean size	0.600 - 0.800 mm
Fines content <sup>[1]</sup>	$< 0.300 \mathrm{~mm}$ : 1 $\% \mathrm{~max}$
Maximum reversible swelling	$Na^{+} \rightarrow H^{+}: 10 \%$

<sup>[1]</sup> Contractual value Test methods are available on request.

## FOOD PROCESSING

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

### HYDRAULIC CHARACTERISTICS

Figure 1 shows the bed expansion of AMBERLITE FPC11 Na, as a function of backwash flow rate and water temperature.

Figure 2 shows the pressure drop data for AMBERLITE<sup>TM</sup> FPC11 Na, as a function of service flow rate and the temperature of the solution to be treated.

#### **Conversion Factors:**

- 1 kPa/m equals 0.0442 psi/ft
- 1 m/h equals 0.41 USgpm/ft<sup>2</sup>





#### 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 regulirements 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 lon 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 lon Exchange resins, consult sources knowledgeable in the handling of these materials.

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