



Product Data Sheet

AMBERLITE™ FPC11 Na Ion Exchange Resin

Food-grade, Gel, Strong Acid Cation Exchange Resin

Description

AMBERLITE™ FPC11 Na Ion Exchange Resin is a gel, strongly acidic, cation exchange resin. The gel matrix provides high exchange capacity and excellent resistance to fouling from fermentation products. The resin has excellent physical, chemical, and thermal stability.

AMBERLITE™ FPC11 Na has been designed specifically for the recovery of amino acids such as lysine from various feed stocks and has been widely used in fixed and moving bed systems.

Applications

- Lysine recovery

Typical Properties

Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Amber, translucent, spherical beads
Chemical Properties	
Ionic Form as Shipped	Na ⁺
Total Exchange Capacity	≥ 2.05 eq/L
Water Retention Capacity	43 – 47%
Particle Size §	
Particle Diameter	600 – 800 µm
< 300 µm	≤ 1.0%
Stability	
Swelling	Na ⁺ → H ⁺ ≤ 10%
Density	
Shipping Weight	850 g/L

§ For additional particle size information, please refer to the [Particle Size Distribution Cross Reference Chart](#) (Form No. 177-01775).

Hydraulic Characteristics

Estimated bed expansion of AMBERLITE™ FPC11 Na Ion Exchange Resin as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AMBERLITE™ FPC11 Na as a function of service flowrate and viscosity is shown in Figure 2. These pressure drop expectations are valid at the start of the service run with clean feed and a well-classified bed.

Figure 1: Backwash Expansion

Temperature = 5 – 60°C (41 – 140°F)

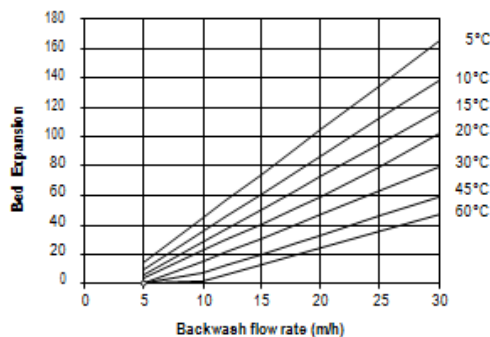
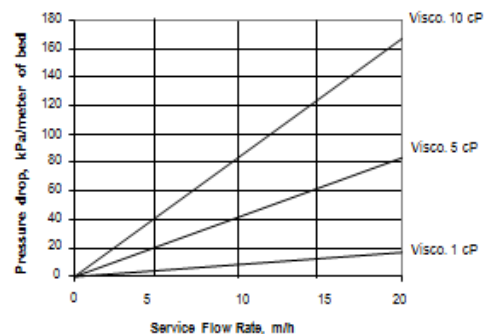


Figure 2: Pressure Drop

Viscosity = 1 – 10 cP



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Please be aware of the following:

- **WARNING:** Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.

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