

**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**

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Physical Properties	
Copolymer	Styrene-divinylbenzene
Matrix	Gel
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Amber, translucent, spherical beads

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Chemical Properties	
Ionic Form as Shipped	Na <sup>+</sup>
Total Exchange Capacity	≥ 2.05 eq/L
Water Retention Capacity	43 – 47%

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Particle Size §	
Particle Diameter	600 – 800 µm
< 300 µm	≤ 1.0%

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Stability	
Swelling	Na <sup>+</sup> → H <sup>+</sup> ≤ 10%

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Density	
Shipping Weight	850 g/L

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

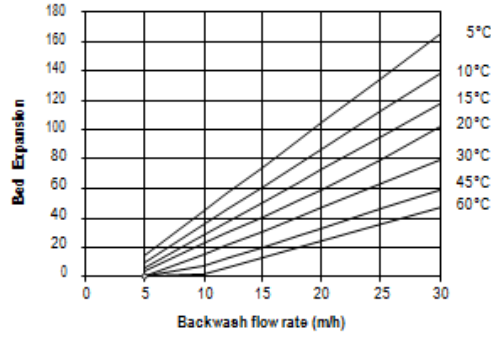
## Hydraulic Characteristics

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.

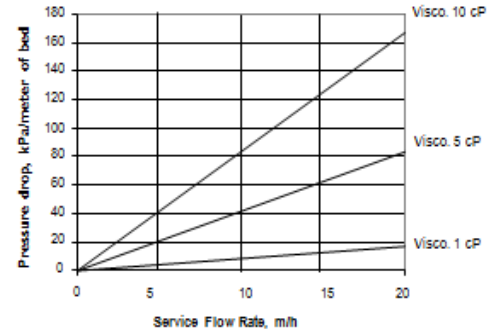
**Figure 1: Backwash Expansion**

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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