



Product Data Sheet

AMBERLITE™ FPX66 Polymeric Adsorbent

Food-grade, Macroporous, Adsorbent Resin

Description

AMBERLITE™ FPX66 Polymeric Adsorbent is a macroporous, non-functionalized, adsorbent resin designed for food and biopharmaceutical processing.

In food processing, AMBERLITE™ FPX66 can be used for a wide variety of applications to purify and decolorize food-additive streams and to recover high-value materials.

In biopharmaceutical processing, AMBERLITE™ FPX66 is an excellent choice for separation and purification of small molecular weight compounds such as antibiotics, vitamins, steroids, amino acids, enzymes, and peptides.

AMBERLITE™ FPX66 is resistant to commonly used organic solvents, and it has high mechanical and thermal stability, making it an ideal choice for use in column or batch systems over a large number of process cycles. The resin has high capacity and high selectivity to provide increased product yields.

Applications

- Food processing
 - Decolorization
 - Purification
 - Recovery of high-value materials
- Biopharmaceutical processing
 - Separation of small molecular weight compounds (antibiotics, vitamins, steroids, amino acids, enzymes, peptides, etc.)

Typical Properties

Physical Properties

Copolymer	Crosslinked aromatic polymer
Matrix	Macroporous
Type	Adsorbent
Functional Group	None
Physical Form	White, opaque, spherical beads

Nitrogen BET

Surface Area	~700 m ² /g
Total Pore Volume	~1.4 cc/g

Chemical Properties

Ionic Form as Shipped	Not applicable
Total Exchange Capacity	Not applicable
Water Retention Capacity	60 – 68%
DVB Content	≤ 50 ppb

Particle Size §

Particle Diameter	600 – 750 µm
< 300 µm	≤ 3.0%
> 1180 µm	≤ 5.0%

Density

Particle Density	1.015 – 1.025 g/mL
Shipping Weight	680 g/L

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

Suggested Operating Conditions

Maximum Operating Temperature	150°C (302°F)
pH Range	0 – 14
Bed Depth, min.	700 mm (2.3 ft)
Flowrates	
Loading	2 – 16 BV*/h (usually)
Washing	1 – 2 BV/h
Backwash	See Figure 1
Regeneration	1 – 2 BV/h
Rinse	2 – 16 BV/h
Regenerants	
<ul style="list-style-type: none"> • Methanol or other water-miscible organic solvents (ethanol, isopropanol, acetone, etc.) • Dilute bases and/or dilute acids • Hot water or steam for volatile materials 	

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin or 7.5 gal per ft³ resin

Hydraulic Characteristics

Estimated bed expansion of AMBERLITE™ FPX66 Polymeric Adsorbent as a function of backwash flowrate and temperature is shown in Figure 1.

Estimated pressure drop for AMBERLITE™ FPX66 as a function of service flowrate and temperature 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 = 10 – 51.7°C (50 – 125°F)

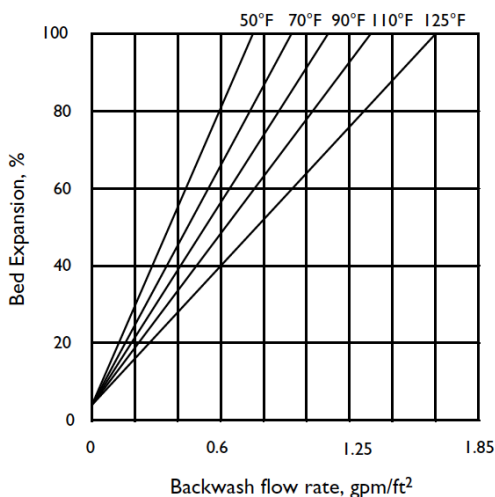
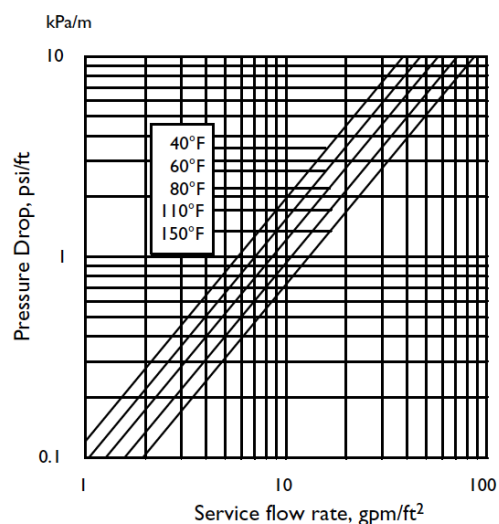


Figure 2: Pressure Drop

Temperature = 4.4 – 65.6°C (40 – 150°F)



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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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