



# PharmaFluor® FEP

## Low Absorption Tubing

### PharmaFluor® FEP

PharmaFluor® FEP is an extremely inert fluoropolymer tubing that meets the demands of biopharmaceutical, pharmaceutical and laboratory applications. PharmaFluor FEP has outstanding chemical and physical characteristics and can be used in a broad range of temperatures, from -100°F (-73°C) to 400°F (203°C).

### Low Sorption and Chemically Inert

PharmaFluor® FEP will resist the absorption/adsorption of fluids, which minimizes the risk of fluid alteration in single use or repeat use bioprocessing applications. PharmaFluor tubing is also virtually unaffected by chemical sanitizers and cleaners and can be cleaned repeatedly without decreasing its service life.

### Fully Characterized and Biocompatible

PharmaFluor® FEP comes complete with biocompatible, physiochemical and extractable testing which can be found in the Validation Guide Summary on the Saint-Gobain Bioprocess Solutions website.

### Features/Benefits

- Chemically inert
- Ultra-pure
- Documented biocompatibility
- Fully characterized
- Extremely low sorption characteristics
- Fully sterilizable via autoclave or gas
- Excellent barrier with very low permeability

### Typical Applications

- Sterile filling and dispensing systems
- Insulin Production
- Diagnostic equipment
- General laboratory use
- Cell and tissue culture transport
- Analytical and process equipment in the biotechnology, pharmaceutical and environmental fields

### Connections

- PharmaFluor® PFA Compression Fittings

## PharmaFluor® Sizes

Part Number*	ID inches (mm)	OD inches (mm)	Appropriate Min. Bend Radius inches (mm)	Maximum Working Pressure psi** (bar) 73°F (23°C)	Maximum Working Pressure psi** (bar) 212°F (100°C)
PHFE6-0125-031-50	1/16 (1.6)	1/8 (3.2)	1/2 (13)	412 (28.4)	148 (10.2)
PHFE6-0250-062-50	1/8 (3.2)	1/4 (6.4)	1/2 (13)	417 (28.8)	150 (10.3)
PHFE6-0250-047-50	5/32 (4)	1/4 (6.4)	3/4 (19)	289 (19.9)	104 (7.2)
PHFE6-0250-031-50	3/16 (4.8)	1/4 (6.4)	1 (25)	177 (12.2)	64 (4.4)
PHFE6-0312-062-50	3/16 (4.8)	5/16 (7.9)	1-1/2 (38)	312 (21.5)	112 (7.7)
PHFE6-0375-062-50	1/4 (6.4)	3/8 (9.5)	1 (25)	250 (17.2)	90 (6.2)
PHFE6-0375-031-50	5/16 (7.9)	3/8 (9.5)	2-1/2 (64)	113 (7.8)	41 (2.8)
PHFE6-0500-062-50	3/8 (9.5)	1/2 (12.7)	2 (51)	97 (6.7)	35 (2.4)

\* Part numbers shown are for 50-foot lengths. Additional lengths available upon request.

\*\* Safety factor of 4 to 1 ratio burst pressure to working pressure. ASTM D1599.

The values listed for working and burst pressures are derived from tests conducted under controlled laboratory conditions. Many factors will reduce the tubing's ability to withstand pressures including temperature, chemical attack, stress, pulsation and the attachment to fittings. It is imperative that the user conduct tests simulating the conditions of the application prior to specifying the tubing for use.

### Sterilization Methods

Autoclavable	30 min at 121°C
Gas (Ethylene Oxide)	Yes

### Typical Physical Properties

Property	ASTM Method	Value or Rating
Color	-	Translucent
Durometer Hardness Shore D	D2240	55
Maximum Service Temperature, °F (°C)	-	400 (204)
Low Temperature Embrittlement, °F (°C)	D746	-100 (-73)
Chemical Resistance (data available)	D741	
-strong or weak acids		excellent
-strong or weak alkalines		excellent
-solvents		excellent
Water Absorption, %, 24 hours @ 73°F (23°C)	D570	<0.01%

Unless otherwise noted, all tests were conducted at room temperature (73°F). Values shown were determined on 0.075" thick extruded strip or 0.075" thick molded ASTM plaques or molded ASTM durometer buttons.

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**IMPORTANT:** It is the user's responsibility to ensure the suitability and safety of Saint-Gobain Life Sciences products for all intended uses and that the materials to be used comply with all applicable medical regulatory requirements. Saint-Gobain Life Sciences assumes no responsibility for any product failures that occur due to misuse of the materials it provides arising out of the design, fabrication or application of the products into which the materials are incorporated.

**WARRANTY:** For a period of 12 months from the date of first sale, Saint-Gobain Life Sciences warrants this product to be free of defects in materials and workmanship. Our only obligation will be to replace any portion proving defective, or at our option, to refund the purchase price thereof.

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