



TFE or FEP TUBING

◆ PHYSICAL

FEP tubing is mechanically tough similar to TFE and unlike almost all other material it is virtually unaffected by aging or extreme weather exposure. The tubing is almost completely clear making visual inspection of fluids possible.

FEP Tubing is slightly stiffer than TFE and while the anti-stick properties are similar, the sliding friction of one coil on another is much greater with FEP than TFE.

🔥 FLAMMABILITY

FEP tubing is rated non-flammable and there are no additives to produce smoke in fires.

🔪 TEMPERATURE

FEP tubing may be used continuously to 400°F (204°C) compared to TFE at 500 °F (260 °C). Most other plastics are limited to an upper service temperature of boiling water or to 300° F (149°C) or even less when irradiated.

FEP and TFE have outstanding resistance to cryogenic temperatures.

⚡ ELECTRICAL

FEP tubing has outstanding electrical properties similar to TFE tubing. The dielectric strength of FEP is high and is unaffected by thermal aging at 392° F (200° C). Volume resistivity remains unchanged even

after prolonged soaking in water. Although short-time dielectric strength, tested in oil, exceeds 30,000 volts for .030" (0.76mm) wall tubing; it is generally recommended that FEP tubing be used at voltages under 2000 to prevent corona ignition.

🧪 CHEMICAL

Like TFE, FEP tubing is chemically inert to essentially all industrial chemicals and solvents, even at elevated temperatures and pressures. However, it reacts with fluorine, molten alkali metals and molten sodium hydroxide. FEP absorbs practically no common acids or bases at temperatures as high as 392° F (200° C) and at exposures of as much as one year.

TYPICAL PROPERTIES OF FEP VS. TFE

	TFE	FEP
Melting Point	621 (328° C)	500-530 (260 -277° C)
Upper Service Temp.	500° F (260° C)	400° F (204° C)
Specify Gravity	2.14-2.20	2.12-2.17
Tensile Strength, PSI at RT	3000-5000	3000-4000
Ultimate Elongation %@RT	250-450	300
Coefficient of Friction	.04-.08	.06-.10
Flex. Mod. PSI & RT.	40-90 x 10 ³	95 x 10 ³
Izod Impact, FT-lb/IN	3	No break
Dielectric Constant, 60-10°	2.1	2.1
Volume Resistivity, OHM-CM H2	10 ¹⁸	10 ¹⁸
Dissipation Factor, 60-10°	.00002-.000045	.00004-.0012
Dielectric Strength (ASTM D876)		
.015 Wall	14,000 Volts	14,000 Volts
.020 Wall	18,000 Volts	18,000 Volts
.030 Wall	32,000 Volts	32,000 Volts

EFFECTIVE 04/04
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