

FEP Fluoropolymer Extruded Film

FEP films are produced from Fluorinated Ethylene Propylene (FEP) resin by a melt extrusion casting process. FEP films offer all the benefits of fluorinated films, such as high temperature and chemical resistance, non-stick properties, and superior dielectric performance. FEP films can be heat-sealed, thermoformed, laminated to various substrates, and serve as a melt adhesive.

FEP films Characteristics

- Thickness range from 0.0005" to 0.010" (12 to 250µm)
- Standard width: up to 60" (1,524 mm)
- Thicknesses >0.002": up to 62" (1,575 mm) wide
- Any slit widths available upon request
- Continuous service temperature range from -400° to 400°F (-240 to 205°C)
- Intermittent service temperature up to 500°F (260°C)
- Superior anti-stick and low friction properties
- Chemically inert and solvent resistant to most chemicals
- Outstanding dielectric properties over a wide range of frequencies and temperatures.
- Excellent light transmission and clarity
- Free of plasticizers, processing aids, or additives
- Acceptable for food contact
- Meets the requirements of US Pharmacopeia protocol for USP class VI plastic
- Bondable (plasma treated or chemically etched) surfaces available

FEP Films Are Available In 4 Grades

FEP PG (Premium Grade)

- Manufactured out of 100% virgin premium grade FEP resin
- Best suited for applications where high dielectric performance is required, such as PCB laminates and wire & cable applications
- Grade of choice for protective, decorative, see-through and other applications where visual appearance and clarity are important

FEP WG (Welding Grade)

- Offers 15-20% cost savings vs. PG grade
- Perfect economical solution for heat sealing, welding, and other melt adhesive applications that don't have high aesthetics requirements

FEP MR (Mold Release Grade)

- Due to its superior non-stick performance and up to 400°F (205°C) service temperature, FEP is the material of choice in high temperature composite molding
- Features high elongation and excellent conformability to complex contoured molds
- Standard colors include red, violet and white. Custom colors available upon request
- Available in a variety of perforated patterns

FEP HG (High Molecular Weight Grade)

- Offers superior stress-crack resistance and flex endurance performance (250,000 cycles MIT test)
- Material of choice for chemical tank linings, pump diaphragms and rupture discs

General Properties	Units	Test Method	FEP PG	FEP WG	FEP MR
Specific Gravity		ASTM D972		2.15	
Flammability		UL-94		V-0	
Water Absorption	%			<0.01	
Tensile Strength	psi(MPa)	ASTM D882		3,500	
Elongation at break	%	ASTM D882		300	
Tensile Modulus	psi(MPa)	ASTM D882		70,000	
Initial Tear Strength(2mil)	g	ASTM D1104		550	
Propagation Tear Strength	g	ASTM D1922		250	
Continuous Use Temp	°F(°C)	UL-746-B		400(205)	
Melt Point	°F(°C)	ASTM D3418		500(260)	
Dielectric Strength(1mil)	Volts/mil	ASTM D149	6500(260)	N/A	N/A
Width	Inches(mm)		60" (1524)		
Thickness	mils(mm)		0.5-10mil (0.0125-0.25mm)		
Standard Colors			Clear	Clear/Tinted	Red/Blue
Surface Treatment Available			Chemical Etching / Plasma		