

ECTFE FILMS

ECTFE FLUOROPOLYMER FILM

NORGARD® ECTFE Fluoropolymer Film is manufactured by **Saint-Gobain®** Performance Plastics Corporation, Tape Solutions business, and comes from ethylene-chlorotrifluoroethylene resin. This material offers the outstanding performance of fluoropolymer film over a temperature range from cryogenic -200°C (-328°F) to 165°C (330°F).

ECTFE film intends to provide the highest abrasion resistance of any fluoropolymer film available. This film has superior chemical resistance and very high tensile strength and flexural modulus.

ECTFE film offers low surface energy, making it an excellent choice for release applications. The low specific gravity of ECTFE yields more square feet per LB than other fluoropolymers for excellent light weight performance.

The combination of heat stability, electric characteristics, and barrier properties provides insulator performance especially suited for the electrical and electronics industry. ECTFE film offers the highest dielectric strength of all fluoropolymer films.

ECTFE film has outstanding resistance to weathering and high energy radiation. This material is suitable for electrical tapes, cable insulation, printed circuits, capacitors, chlorine cells, flat cable constructions, and solar collectors.

ECTFE film offers a UL V-0 rating for flammability. This provides performance suitable for aircraft cabin interiors and fuel cell membranes

**Previously known as*

CHEMFILM® FEP TYPE FS AND FST



FEATURES AND BENEFITS

- Highest mechanical strength of melt fluoropolymers
- Outstanding release properties
- Performance from -200°C (-328°F) to 165°C (330°F)
- High dielectric strength
- Excellent chemical, radiation, weather and abrasion resistance
- Non-flammable
- Thermoformable

AVAILABILITY

- Product thickness from 0.0005" (0.013 mm) to 0.010" (0.254 mm)
- Width up to 60" (1,524 mm)
- Available in cementable (surface treated form)

TYPICAL PROPERTIES

General	Value	Unit	Test Method
Standard Widths	1,524	mm	-
	60	inches	
Specific Gravity	1.68	-	ASTM D-792
Yield (1 mil)	22	m ² /kg	-
	115	ft ² /lb	
Water Absorption, 24 hr.	<0.01	%	-
Mechanical	Value	Unit	Test Method
Tensile Strength	55	MPa	ASTM D-882
	8,000	psi	
Elongation, Ultimate	250	%	ASTM D-882
Tensile Modulus	1,375	MPa	ASTM D-882
	200,000	psi	
Initial Tear Strength	4.4	N	ASTM D-1004
	450	gm/mil	
Propagating Tear Strength, 1 mil	11.6	N	ASTM D-1922
	1,200	gm/mil	
Fold Endurance (M.I.T.)	>250,000	cycles	ASTM D-2176
Electrical	Value	Unit	Test Method
Dielectric Strength, 1 mil	216	kV/mm	ASTM D-149
	5,000	V/mil	
Dielectric Constant	2.55 - 2.63	-	ASTM D-150
Dissipation Factor, 1 kHz	<0.005	-	ASTM D-150
Thermal	Value	Unit	Test Method
Melting Point	240	°C	ASTM D-149
	465	°F	
Continuous Service Temperature	148 - 172	°C	-
	300 - 340	°F	
Flammability	V-0	-	ASTM UL-94
Heat Sealing Temperature	245 - 260	°C	-
	475 - 500	°F	

The values presented are typical values and should not be used for specification purposes. Contact your **Saint-Gobain** Tape Solutions representative for more information.

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