



High-Performance Films for Composite Hose & Duct Manufacturing

THE ULTIMATE LINING SOLUTION FOR YOUR TOUGHEST COMPOSITE HOSE & DUCT CHALLENGES

In industries where system integrity are paramount, you need lining solutions you can trust to perform flawlessly, even under the most punishing conditions. TCI's high-performance fluoropolymer films deliver the uncompromising protection your critical composite hose and flexible duct applications demand. Our comprehensive lineup of high-performance materials – including 100% PTFE CrossFilm™, Cast PTFE Film, FEP, PFA, ETFE, ECTFE and PVDF film - provides the ideal lining solutions for composite hoses and ducts used in the most demanding applications. From cryogenic to high-heat environments, our films maintain their physical properties and chemical inertness to safeguard the reliability performance of your composite hoses and ducts.

Available as thermo-bondable or adhesive bondable, TCI's fluoropolymer films can be supplied in rolled goods, slit to any width, or heat sealed into tubes to seamlessly integrate with your specific application needs.

CHEMICAL RESISTANCE:

Fluoropolymers are highly resistant to a wide range of chemicals, including acids, bases, solvents, and cleaning agents, preventing corrosion and contamination of the transferred fluid.

HIGH TEMPERATURE STABILITY:

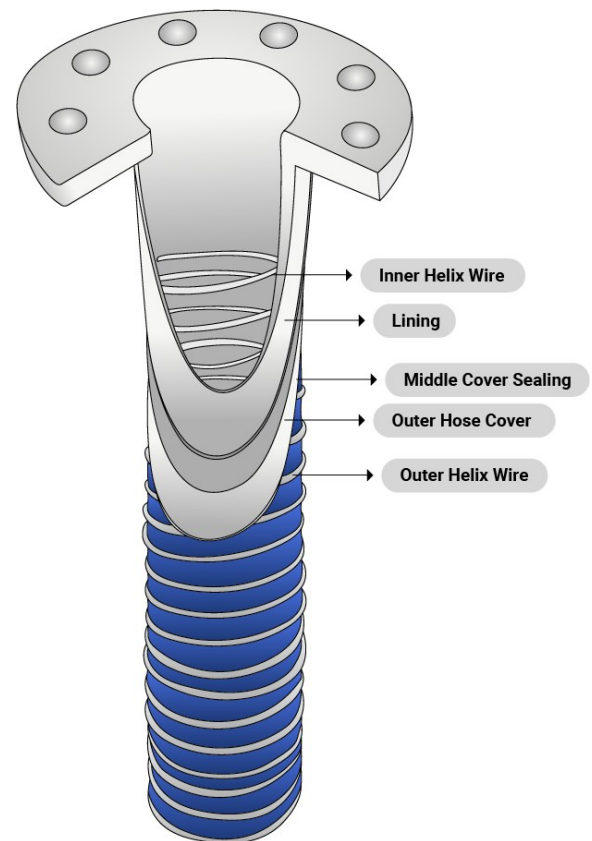
Fluoropolymers can withstand high temperatures without degrading, making them suitable for hot fluid transfer applications.

LOW FRICTION:

The smooth surface of the fluoropolymer lining reduces friction, allowing for easier fluid flow and minimizing pressure drops.

CLEAN TRANSFER:

The non-stick nature of fluoropolymer prevents residue buildup within the hose, ensuring clean transfer of high-purity fluids.



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TEXTILES COATED INTERNATIONAL | Manufacturer of High-Performance Fluoropolymer Films, Composites, and Laminates

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	Units	Test Method	CrossFilm™	PTFE Cast Film
			100% PTFE	CF LE
General Properties				
Specific Gravity		ASTM D792	2.15	2.15
Area Yield	ft ² /lb/mil		90	90
Flammability		UL-94	V-0	V-0
Water Absorption	%		<0.03	<0.01
Mechanical Properties				
Tensile Strength	psi	ASTM D882	4,300	4,300
Elongation at Break	%	ASTM D882	>400	550
Folding Endurance	cycles	ISO 7854:1984	36,000	4,000
Thermal Properties				
Continuous Use Temp	°F (°C)	UL-746 B	600 (316)	500 (260)
Melt Point	°F (°C)	ASTM D3418	620 (327)	620 (327)
Coeff. of Lin. Thermal Expansion	in/(in °F)	ASTM D696	5.5x10 ⁻⁵	5.5x10 ⁻⁵
Product Offering				
Thickness	mils (µm)		2-60 (51 - 1524)	2 - 5 (51 - 127)
Standard Colors			Black, Blue, Gray	Red, Blue, White
Surface Treatments Available				
Thermo-bondable			Y	Y
Adhesive Bondable			Y	Y

	Units	Test Method	TCI Melt Extruded Films				
			PFA	FEP	ETFE	ECTFE	PVDF
			PFA WG	FEP WG	ETFE PG	ECTFE 500 LC	PVDF KF
General Properties							
Specific Gravity		ASTM D792	2.15	2.15	1.74	1.68	1.78
Area Yield	ft ² /lb/mil		90	90	110	114	108
Flammability		UL-94			V-0		
Water Absorption	%		<0.01	<0.01	<0.03	<0.01	<0.04
Mechanical Properties							
Tensile Strength	psi	ASTM D882	5,000	3,500	7,000	6,500	5,000
Elongation at Break	%	ASTM D882	500	300	300	300	250
Tensile Modulus	psi	ASTM D882	70,000	70,000	140,000	200,000	100,000
Folding Endurance (MIT)	cycles	ASTM D2176	100,000	10,000	>50,000	>250,000	>25,000
Thermal Properties							
Continuous Use Temp	°F (°C)	UL-746 B	500 (260)	400 (205)	330 (165)	330 (165)	300 (155)
Melt Point	°F (°C)	ASTM D3418	575 (320)	500 (260)	500 (260)	465 (240)	322 (161)
Coeff. of Lin. Thermal Expansion	in/(in °F)	ASTM D696	5.5x10 ⁻⁵	5.5x10 ⁻⁵	4x10 ⁻⁵	9x10 ⁻⁵	7x10 ⁻⁵
Product Offering							
Thickness	mils (µm)		0.5-10 (12.5-250)			1-10 (25-250)	3-10 (75-250)
Standard Colors			Clear				
Surface Treatments Available							
Thermo-bondable			Y	Y	Y	Y	Y
Adhesive Bondable			Y	Y	Y	Y	Y

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