



FEP & PFA Welding Grade Films

FLUOROPOLYMER EXTRUDED FILMS FOR WELDING AND HEAT SEALING

TCI's FEP and PFA welding grade (WG) films are ideal for welding or heat sealing various substrates and composite structures such as PTFE-coated fiberglass fabrics. The excellent chemical and temperature resistance of FEP and PFA films allow bonded structures to perform in critical environments. Fluoropolymer films are also flexible adhesives, permitting bonded structures to be post-formed.

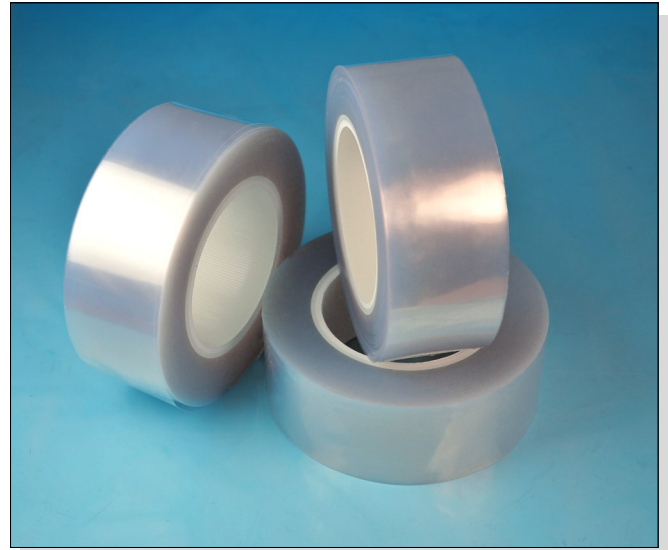
TCI FEP and PFA films can be heated together with substrates that are being bonded, and sealed under pressure, utilizing various heating techniques, including:

- **Hot Bar heat sealing**
- **Thermal Impulse heat sealing**

Regardless of bonding method, heat sealing equipment needs to have a minimum temperature capability of 550°F (288°C) for bonding with FEP film, and minimum of 600°F (316°C) for bonding with PFA film.

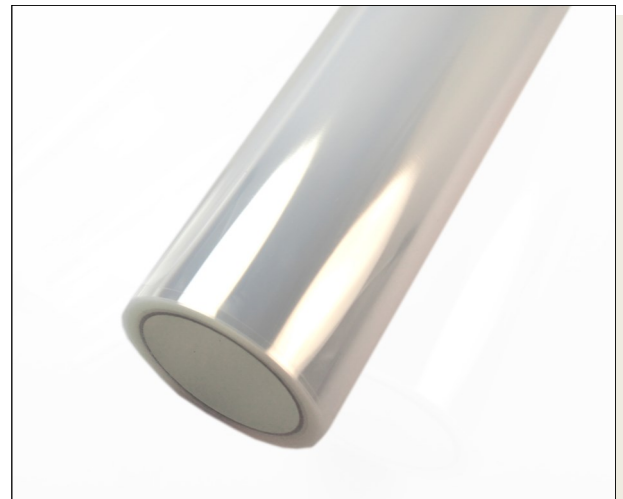
For heat sealing of PTFE and PTFE-coated fabrics, sealing equipment capable of 700° - 740°F (370-385°C) is typically required.

TCI's FEP and PFA welding grade films are offered at substantial cost savings (up to 25%) versus premium grade films, making them an economical solution for these applications.



General Availability:

- Thickness range from 0.001" to 0.010" (25 to 250 μm)
- Standard width: 60" (1,524 mm)
- Any slit widths available upon request



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

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			FEP WG	PFA WG
General Properties	Units	Test Method		
Specific Gravity		ASTM D792	2.15	
Area Yield	ft ² /lb/mil (m ² /kg/25µm)		90 (18.3)	
Flammability		UL-94	V-0	
Mechanical Properties				
Tensile Strength	psi	ASTM D882	3,500	3,000
Elongation at Break	%	ASTM D882	300	300
Tensile Modulus	psi	ASTM D882	70,000	70,000
Initial Tear Strength (2 mil film)	g	ASTM D1004	550	500
Propagation Tear Strength (2 mil film)	g	ASTM D1922	250	250
Folding Endurance (MIT)	cycles	ASTM D2176	10,000	>100,000
Thermal Properties				
Continuous Use Temp	°F (°C)	UL-746 B	400 (205)	500 (260)
Melt Point	°F (°C)	ASTM D3418	500 (260)	580 (305)
Coeff. of Lin. Thermal Expansion	in/(in °F)	ASTM D696	5.5x10 ⁻⁵	5.5x10 ⁻⁵
Product Offering				
Width	inches (mm)		Up to 60" (1,524)	
Thickness	mils (µm)		1 - 10 (25-250)	
Standard Colors			Clear Tinted	Clear Tinted

The above table contains typical representative values and is not to be used for product specification. Contact TCI for a formal specification.

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