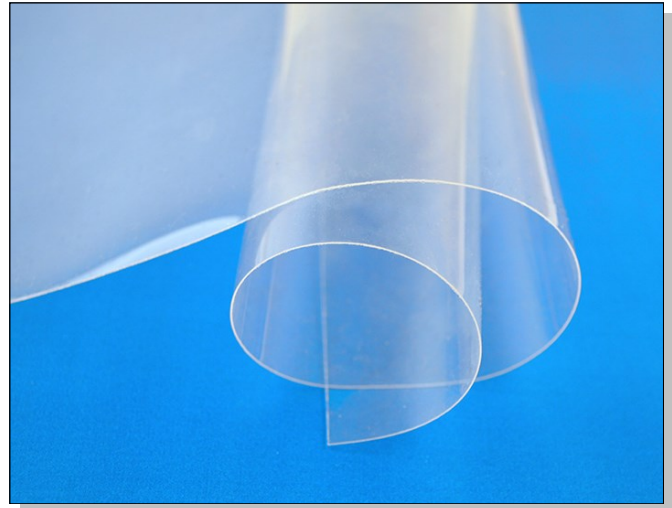




THV 500 Fluoropolymer Extruded Films

THV FILM FOR USE IN HIGH PERFORMANCE APPLICATIONS

TCI's THV 500 films are produced from THV resin (terpolymer of TFE, HFP, and VF2) by a melt extrusion casting process. It provides a combination of performance characteristics virtually unmatched by any other fluoropolymer. Characteristics include relatively low processing temperature, ability to bond to elastomers and hydrocarbon-based plastics, excellent flexibility, and excellent optical clarity. THV films can be heat-sealed, thermoformed, and laminated to various substrates.



TCI's THV 500 films are utilized in a variety of industries and applications:

Chemical and Fuel Storage and Handling

- Due to its superior chemical resistance to fuels over a broad temperature range and its low permeability to solvents and gases, THV films are used in fuel and chemical tank linings, drop-in liners, and bag liners.

Safety Glass

- Excellent clarity (<1% haze) and mechanical and thermal properties make THV 500 film an ideal interlayer film for lamination onto glass, or sandwiched in between multi-layer glass systems in order to provide fire safety and anti-shutter performance in many glass applications.

Photovoltaic Panels

- Due to their excellent barrier properties, fire resistance and high solar transmittance, THV 500 films are very well suited for use in the back sheet and front sheet glazing of PV panels.

TCI THV 500 films characteristics:

- Very high clarity and light transmission
- Excellent flexibility
- Low processing temperatures allow co-processing with olefinic plastics and hydrocarbon elastomers
- Good weatherability and UV-stable
- Flame retardant
- Excellent chemical and permeation resistance
- Bondable to itself and other substrates (for multi-layer constructions)
- Good dielectric properties

TCI THV 500 films - General Availability:

- Standard thicknesses are 0.005" and 0.010" (125 and 250 μ m)
- Other gages available upon request
- Standard width: 60" (1,524 mm)
- Slit widths available upon request
- Standard color: clear/natural, custom colors available upon request
- Bondable / Plasma treated surfaces available upon request

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

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THV Fluoropolymer Extruded Films

			THV 500
General Properties	Units	Test Method	
Specific Gravity		ASTM D792	1.98
Area Yield	ft ² /lb/mil		97
Area Yield	m ² /kg/25μ		20.3
Flammability		UL-94	V-0
Water Absorption	% / 24 hours	D570	<0.01
Mechanical Properties			
Tensile Strength	psi (MPa)	ASTM D882	4,500 (30)
Elongation at Break	%	ASTM D882	600
Tensile Modulus	psi (MPa)	ASTM D882	30,000 (210)
Folding Endurance (MIT)	Cycles	ASTM D2176	>100,000
Thermal Properties			
Continuous Use Temp	°F (°C)	UL-746 B	250 (120)
Melt Point	°F (°C)	ASTM D3418	330 (165)
Coeff. of Lin. Thermal Expansion	10 ⁻⁵ /°C	ASTM D696	11.4
Electrical Properties			
Dielectric Strength (1mil film)	v/mil (kv/mm)	ASTM D149	1,500 (60)
Dielectric Contant 1kHz		ASTM D149	4.8
Optical Properties			
Refractive Index		ASTM D542	1.36
Solar Transmission	%	ASTM D1003	95
Haze (4 mil (100 μm) film)	%	ASTM D1003	1
Product Offering			
Width	inches (mm)		up to 60 (1,524)
Thickness	inches (μm)		0.005 & 0.010 (125 & 250)
Standard Colors			Clear
Surface Treatments Available			
Chemical Etching			•
Plasma Treatment			•
Applications, Markets			
Composite Molding Process / Release Films			
Chemical Process			•
Electrical / Electronics			•
Medical			•
Optical / Photovoltaics			•
Protective / Decorative			•

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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