



PRODUCT BULLETIN

TEMPALUX® FILM – POLYETHERIMIDE

Tempalux offers high heat resistance coupled with high strength, stiffness, UV stability and broad chemical resistance. The combination of outstanding thermal, mechanical and electrical properties together with exceptional flame resistance and thermoformability, provide unprecedented performance for a wide variety of demanding new design concepts.

The following physical property information is based on typical values of the base Ultem® 1000 resin as well as test results obtained from actual film testing.

Applications Include:

- Flex circuits
- High temperature labels
- Electrical insulation
- IC sockets
- Automotive sensors
- Electronic insulation
- Hot melt adhesives

Advantages of Tempalux Film:

- High heat deflection and continuous use temperature
- Inherent flame resistance
- Extremely low NBS smoke evolution and superior LOI
- Exceptional tensile and flexural strength
- High dielectric strength
- Low dissipation factor
- Exceptional mechanical properties
- Dimensionally stable at varying temperatures
- Inherent UV stability
- Resin FDA compliant

Manufacturing Capabilities:

- **Film:**
.001" to .010" thick up to 27" wide
.011" to .029" thick up to 26" wide

Finishes:

- all thicknesses available polished one side, matte the other (P/M)

In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.

Property	Units	Test Standard	Result
Mechanical			
Tensile Strength @yield	psi	ASTM D882	14,200
Tensile Elongation @break	%	ASTM D882	52
Tensile Modulus	psi	ASTM D882	475,000
Flexural Modulus	psi	ASTM D790	480,000
Tear Strength - prop.	g/mil	ASTM D1004	381
Thermal			
Continuous Use Temperature–UL	°F	—	338
Heat Deflection Temperature @264 psi	°F	ASTM D648	394
Melt Temperature–DSC	°F	—	—
Glass Transition Temperature	°F	ASTM D3418	420
Flammability			
UL Rating—UL94	—	—	VTM-0
LOI	%	ASTM D2863	27
NBS Smoke	Dmax	ASTM E662	6
Electrical			
Surface Resistivity	Ohms	ASTM D257	>10 ¹⁶
Dielectric Strength @.003"	V/mil	ASTM D149	3,050
Dielectric Constant	1 KHz	ASTM D150	3.15
Dissipation Factor	1 KHz	ASTM D150	1.3 x 10 ⁻³
Other			
Specific Gravity	—	ASTM D792	1.27
Water Absorption @24 hours	%	ASTM D570	0.25
Refractive Index	—	—	1.658
Haze	%	ASTM D1003	—
Area Factor	in ² /lb/mil	—	21,888