



PRODUCT BULLETIN

PES FILM – POLYETHERSULFONE

PES film possesses a combination of properties such as high resistance to heat and combustibility, low smoke emission and transparency. These coupled with light weight, high tear initiation and propagation strength, dimensional stability, chemical resistance and thermoformability make the film particularly useful in electrical, aerospace, automotive, and mass transit industries.

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

Applications Include:

- Liquid crystal displays
- Radomes
- Magnet wire insulation
- Hot melt adhesives
- Flex circuitry
- High temperature labels

Advantages of PES Film:

- High heat deflection and continuous use temperature
- Exceptional tensile and flexural strength
- High dielectric strength
- Exceptional mechanical properties
- Dimensionally stable at varying temperatures
- Transparency
- Hydrolytically stable

Manufacturing Capabilities:

- **Film:**
.001" to .010" thick up to 27" wide
.011" to 0.29" 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	10,500
Tensile Elongation @break	%	ASTM D882	52
Tensile Modulus	psi	ASTM D882	—
Flexural Modulus	psi	ASTM D790	370,000
Tear Strength - prop.	g/mil	ASTM D1004	96
Thermal			
Continuous Use Temperature—UL	°F	—	356
Heat Deflection Temperature @264 psi	°F	ASTM D648	383
Melt Temperature—DSC	°F	—	—
Glass Transition Temperature	°F	ASTM D3418	437
Flammability			
UL Rating—UL94	—	—	—
LOI	%	ASTM D2863	38
NBS Smoke	Dmax	ASTM E662	—
Electrical			
Surface Resistivity	Ohms	ASTM D257	>10 ¹⁴
Dielectric Strength @.004"	V/mil	ASTM D149	4,600
Dielectric Constant	1 KHz	ASTM D150	3.5
Dissipation Factor	1 KHz	ASTM D150	0.011
Other			
Specific Gravity	—	ASTM D792	1.37
Water Absorption @24 hours	%	ASTM D570	0.7
Refractive Index	—	—	1.65
Haze	%	ASTM D1003	—
Area Factor	in ² /lb/mil	—	20,000