



THERMALUX® POLYSULFONE

Thermalux® polysulfone offers excellent dimensional stability, and resists deformation under load even at elevated temperatures. Thermalux products will withstand exposure to soap, detergent solutions and some hydrocarbon oils, even at elevated temperatures under moderate stress levels.

The following physical property information is based on typical values of the base polysulfone resin.

Applications Include:

- Float switches
- Membrane cartridge filter system
- Solenoid valve body
- Dairy connectors

Advantages of Thermalux:

- Dimensionally stable
- Easily machined
- FDA compliant
- Transparent grades available
- Excellent mechanical and electrical properties
- Steam resistant
- Low outgassing levels

Manufacturing Capabilities:

- **Rod:** $\frac{3}{16}$ " to 8" dia.
- **Sheet:** .035" to $\frac{3}{16}$ " thick
- **Slab:** $\frac{1}{4}$ " to 4" thick
- **Film:** .002" to .029" thick

Colors/Grades:

- Transparent Light Amber

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 D638	10,200
Tensile Modulus	psi	ASTM D638	360,000
Tensile Elongation @break	%	ASTM D638	50.0-100.0
Flexural Strength @yield	psi	ASTM D790	15,400
Flexural Modulus	psi	ASTM D790	390,000
Compressive Strength @yield	psi	ASTM D695	13,900
Compressive Modulus	psi	ASTM D695	374,000
Izod Impact Strength Un-Notched	ft•lbs/in	ASTM D256	No Break
Notched @73°F	ft•lbs/in	ASTM D256	1.3
Hardness	M Scale	ASTM D785	M69
Thermal			
Heat Deflection Temperature @264 psi	°F	ASTM D648	345
Coefficient of Thermal Expansion	in/in/°F	ASTM D696	3.1×10^{-5}
Flammability Rating @.0176"	—	UL94	HB
Thermal Conductivity	(BTU•in)/(hr•ft ² •°F)	ASTM C177	1.8
Limiting Oxygen Index	%	ASTM D2863	26
Electrical			
Dielectric Strength	V/mil	ASTM D149	430
Dielectric Constant @1kHz	—	ASTM D150	3.04
Dissipation Factor @1kHz	—	ASTM D150	0.0010
Volume Resistivity	ohm•cm	ASTM D257	3.0×10^{16}
Optical			
Haze (0.070")	%	ASTM D1003	1.5
Transparency (0.070")	%	ASTM D1003	86
Other			
Specific Gravity	—	ASTM D792	1.24
Water Absorption @24 hours	%	ASTM D570	0.30

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