

Thermalux® Film

Polysulfone

Westlake Plastics Company

Message:

Thermalux is a tough, rigid, high-strength, amorphous thermoplastic that maintains its properties over a wide temperature range. It has good electrical properties, clarity and toughness, plus exceptional steam resistance and thermoformability. It is used widely in food service, electronics, medical devices, chemical process equipment and automotive industries.

Applications Include:

- Flex circuits
- Hot melt adhesives
- Thermoformed food trays
- High temperature labels
- Medical device windows
- Hydraulic piston components

Advantages of Thermalux Film:

- Exceptional electrical properties over varying conditions
- Excellent mechanical properties
- Good chemical resistance
- Hydrolytically stable
- Transparency
- Resin FDA compliant

General Information	
Features	Amorphous
	Bondability
	Food Contact Acceptable
	Good Adhesion
	Good Chemical Resistance
	Good Electrical Properties
	Good Toughness
	High Strength
	Hydrolytically Stable
	Medium Clarity
	Medium Rigidity
	Steam Resistant
Uses	Adhesives
	Automotive Applications
	Electrical/Electronic Applications
	Film
	Hydraulic Applications
	Labels
	Medical/Healthcare Applications
	Non-specific Food Applications

Agency Ratings	FDA Unspecified Rating		
Appearance	Clear/Transparent		
Forms	Film		
Processing Method	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.24	g/cm ³	ASTM D792
Water Absorption (24 hr)	0.30	%	ASTM D570
Films	Nominal Value	Unit	Test Method
Elastic Modulus - MD	2480	MPa	ASTM D882
Tensile Strength - MD (Yield)	73.1	MPa	ASTM D882
Tensile Elongation - MD (Break)	110	%	ASTM D882
Flexural Modulus - MD	2690	MPa	ASTM D790
Area Factor	22400	in ² /lb/mil	
Tear Strength - prop	6.2	kN/m	ASTM D1004
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	174	°C	ASTM D648
Continuous Use Temperature	150	°C	
Glass Transition Temperature	190	°C	ASTM D3418
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	3.0E+16	ohms	ASTM D257
Dielectric Strength (0.102 mm)	94	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.14		ASTM D150
Dissipation Factor (1 kHz)	1.3E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94
Oxygen Index	30	%	ASTM D2863
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.633		
Transmittance	70.0 to 85.0	%	
Haze	0.60	%	ASTM D1003

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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