Tempalux® Film

Polyether Imide

Westlake Plastics Company

Message:

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.
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

General Information	
Features	Bondability
	Excellent Printability
	Flame Retardant
	Food Contact Acceptable
	Good Adhesion
	Good Chemical Resistance
	Good Dimensional Stability
	Good Electrical Properties
	Good UV Resistance
	High Heat Resistance
	High Stiffness
	High Strength
	High Tensile Strength
	Low Smoke Emission
Uses	Adhesives
	Automotive Applications
	Electronic Insulation
	Film

Labels

Agency Ratings	FDA Unspecified Rating		
Forms	Film		
Processing Method	Thermoforming		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.27	g/cm³	ASTM D792
Water Absorption (24 hr)	0.25	%	ASTM D570
Films	**Nominal Value**	**Unit**	**Test Method**
Elastic Modulus - MD	3280	MPa	ASTM D882
Tensile Strength - MD (Yield)	97.9	MPa	ASTM D882
Tensile Elongation - MD (Break)	52	%	ASTM D882
Flexural Modulus - MD	3310	MPa	ASTM D790
Oxygen Permeability	9.8	$cm^3 \cdot mm/m^2/atm/24\ hr$	
Water Vapor Transmission Rate	2.3	$g \cdot mm/m^2/atm/24\ hr$	
Area Factor	21900	$in^2/lb/mil$	
Carbon Dioxide Permeability	67	$cm^3 \cdot mm/m^2/atm/24\ hr$	
NBS Smoke Density	6.00		ASTM E662
Tear Strength - prop	147.1	kN/m	ASTM D1004
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	201	°C	ASTM D648
Continuous Use Temperature	170	°C	
Glass Transition Temperature	216	°C	ASTM D3418
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+16	ohms	ASTM D257
Dielectric Strength (0.0762 mm)	120	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.15		ASTM D150
Dissipation Factor (1 kHz)	1.3E-3		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	VTM-0		UL 94
Oxygen Index	27	%	ASTM D2863
Optical	**Nominal Value**		
Refractive Index	1.658		

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