

Ultem* 5000B Film Product Datasheet

Description

Ultem* 5000B film is a high performance thermoplastic Polyetherimide material. The combination of high temperature resistance, flame resistance, low moisture absorption and excellent dielectric properties makes Ultem film a good candidate for a broad range of electrical and electronic applications. Ultem film products are thermo-formable and can be heat-sealed to a wide variety of materials.

Color code: 50 μm (0.002") to 750 μm (0.030").
Standard Roll Width: 1220mm (48")
Texture: Smooth/Ultra fine matte
Color: Natural Amber

Typical Property Values ♦

Property	Test Method	Units	Value
Physical			
Specific Gravity	ISO 1183	g/cc	1.28
Water Absorption, Equilibrium at 23°C, 24 Hr.	ASTM D570	%	1.18
Water Absorption, 50%RH, 23°C, 24 Hr.	ASTM D570	%	0.33
Mechanical			
Tensile Modulus	ISO R527	MPa	2,400
Tensile Strength @ Yield	ISO R527	MPa	80
Tensile Elongation @ Yield	ISO R527	%	7.5
Tensile Strength @ Break	ISO R527	MPa	74
Tensile Elongation @ Break	ISO R527	%	23
Tear Strength Initiation @ 50 μm	ASTM D1004	N	18
Tear Strength Propagation @ 50 μm	ASTM D1938	N	0.17
Thermal			
Coefficient of Thermal Expansion	IPC-TM-650	ppm/°C	50
Shrinkage @ 150°C & 50 μm	IPC-TM-650	%	0.17
Shrinkage @ 190°C & 50 μm	IPC-TM-650	%	0.30
Glass Transition Temperature	DMA	°C	225
Thermal Conductivity	ASTM C177	W/m°C	Testing
Electrical			
Dielectric Strength @ 50 μm Oil	ASTM D149	Volts/mil	5,300
Dielectric Constant	IPC-TM-650		3.3
Dissipation Factor	IPC-TM-650		0.006
Volume Resistivity	IPC-TM-650	M Ω -cm	2.5×10^8
Surface Resistivity	IPC-TM-650	M Ω	2.1×10^5
Flammability			
UL Performance (internal GE testing)	UL 94		VTM-0

♦ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local GE Structured Products representative or the GE Structured Products Quality Services Department.



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