

# ULTEM™ 1000B NATURAL FILM

## (75 µm - 175 µm)

### PRODUCT DATASHEET

#### DESCRIPTION

ULTEM™ 1000B 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.

#### TYPICAL PROPERTY VALUES ◆

PROPERTY	TEST METHOD	UNITS	VALUE
<b>Mechanical</b>			
Tensile Modulus	ISO R527	MPa	3000
Tensile Strength @ Yield	ISO R527	MPa	100
Tensile Elongation at @ Yield	ISO R527	%	6.5
Tensile Strength @ Break	ISO R527	%	60
Tear Strength Initiation @75 µm	ASTM D1004	N/mm	360
Tear Strength Propagation @75 µm	ASTM D1938	N/mm	3.5
<b>Thermal</b>			
Coefficient of Thermal Expansion	IPC-TM-650	ppm/°C	52
Shrinkage @ 170°C EXT. DIR.	IPC-TM-650	%	0.33
Shrinkage @ 170°C CROSS. DIR.	IPC-TM-650	%	0.24
Glass Transition Temperature	DMA	°C	217
Thermal Conductivity	ASTM C177	W/m°C	0.22
<b>Physical</b>			
Specific Gravity	ISO 1183	g/cc	1.27
Water Absorption, immersion, 23°C, 24 hr	ASTM D570	%	1.25
Water Absorption, 50%RH, 23°C, 24 hr.	ASTM D570	%	0.48
<b>Electrical</b>			
Dielectric Strength @ 125 µm oil	ASTM D149	Volts/mil	3,650
Dielectric Constant	IPC-TM-650		3.2
Dissipation Factor	IPC-TM-650		0.005
Volume Resistivity	ASTM D257	M 'Ω-cm	2.5 x 10 <sup>15</sup>
Surface Resistivity	ASTM D257	M 'Ω	1.9 x 10 <sup>16</sup>
<b>Flammability</b>			
UL Performance (75 - 175 µm)	UL94		VTM-0

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

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## PRODUCT AVAILABILITY

Standard gauges	: 75 µm (0,003") +/-5% - 175 µm (0,020") +/-5%
Standard roll width	: 1270 mm (50")
Texture	: Smooth / fine matte
Color code	: 1000
Color	: Natural amber

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