

# ULTEM\* XH6050B Film

## Product Datasheet

### DESCRIPTION – Single Lot Film Data

Developmental Grade ULTEM\* XH6050B film is a new high performance thermoplastic Polyetherimide material. The combination of high glass transition temperature (245°C), low moisture absorption and excellent dielectric properties makes ULTEM film a good candidate for a broad range of Electronic applications. ULTEM film products are thermo-formable and can be heat-sealed to a wide variety of materials.

### Configuration

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

### Typical property values\*\* (100 µm Gauge unless noted)

Property	Test Method	Units	Value
<b>Physical</b>			
Specific Gravity	ISO 1183	kg/m <sup>3</sup>	1300
Water Absorption, Immersion, 23°C, 24 Hr.	ASTM D570	%	1.6
Water Absorption, 50%RH, 23°C, 24 Hr.	ASTM D570	%	0.48
<b>Mechanical</b>			
Tensile Modulus	ISO R527	MPa	2800
Tensile Strength @ Yield	ISO R527	MPa	85
Tensile Elongation @ Yield	ISO R527	%	7.5
Tensile Strength @ Break	ISO R527	MPa	83
Tensile Elongation @ Break	ISO R527	%	10
Tear Strength Initiation @ 50 µm	ASTM D1004	N	16
Tear Strength Propagation @ 50 µm	ASTM D1938	N	0.18
<b>Thermal</b>			
Coefficient of Thermal Expansion	IPC-TM-650	ppm/°C	55
Shrinkage @ 150°C & 50 µm	IPC-TM-650	%	0.18
Shrinkage @ 190°C & 50 µm	IPC-TM-650	%	0.28
Glass Transition Temperature	DMA	°C	245
Thermal Conductivity (Bar)	ASTM C177	W/m°C	0.18
<b>Electrical</b>			
Dielectric Strength @ 50 µm Oil	ASTM D149	Volts/mil	4.700
Dielectric Constant	IPC-TM-650		3.3
Dissipation Factor	IPC-TM-650		0.005
Volume Resistivity	IPC-TM-650	M 'Ω-cm	6.4 × 10 <sup>8</sup>
Surface Resistivity	IPC-TM-650	M 'Ω	7.9 × 10 <sup>4</sup>
<b>Flammability</b>	UL 94	VTM0	<b>Pass</b>

\*\* These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local GE Advanced Materials, Specialty Film & Sheet representative or the GE Advanced Materials, Specialty Film & Sheet Quality Services Department.

Note: This preliminary data sheet is provided to assist you in the evaluation of the product that is under development. Until GE releases this product for general sales, GE reserves the right to alter prices, specifications, features, capabilities, function, release dates, and even general availability of the product at any time.



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