AJEDIUM ULTEM® 1000 FILM

Ajedium ULTEM® 1000 films
Data Sheet

ULTEM® 1000 is a Polyetherimide (PEI) suitable for applications at high temperature. This amorphous polymer shows a combination of outstanding thermal, mechanical and electrical properties, together with very low flammability and low levels of smoke evolution during combustion.

These features make PEI 1000 extremely suitable for electrical / electronic insulators and for a variety of structural components requiring high strength and rigidity at elevated temperatures.

Polyetherimide resists a wide range of chemicals, has good resistance to UV and gamma radiation and its high glass transition temperature allows the use at high temperatures while keeping the high mechanical properties.

Electrical properties show very good stability under variable temperature, humidity, and frequency conditions. Moreover it exhibits a low dissipation factor even at very high frequencies

MANUFACTURING

ULTEM® 1000 films are extruded by Ajedium in a wide range of thicknesses, widths and lengths.

For further information on ULTEM® 1000 films produced by Ajedium Films, a division of Solvay Solexis, Inc. contact your Solvay Solexis representative or go to ***www.ajedium.com****.*

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AJEDIUM Films
a division of Solvay Solexis, Inc.

Solvay Solexis

SOLVAY

AJEDIUM ULTEM® 1000 FILM

AJEDIUM ULTEM® 1000 FILMS TYPICAL PROPERTIES*

	Test Method	Typical Values			
		SI Units		US Customary Units	
Physical and Thermal Properties					
Yield	internal	803	$m^2/kg/\mu m$	22,222	$in^2/lb/mil$
Glass Transition Temperature	ASTM D-3418	217	°C	423	°F
Thermal Conductivity	ASTM C-177	0.122	W/(m·K)	0.73	BTU·in/(h·ft^2·°F)
Mechanical Properties		***MD***	***TD***	***MD***	***TD***
Stress at Yield @ 23 °C (73 °F)	ASTM D-882	103 MPa	107 MPa	15000 psi	15600 psi
Elongation at Yield @ 23 °C (73 °F)	ASTM D-882	7 %	7 %	7 %	7 %
Stress at Break @ 23 °C (73 °F)	ASTM D-882	114 MPa	128 MPa	16600 psi	18500 psi
Elongation at Break @ 23 °C (73 °F)	ASTM D-882	99 %	137 %	99 %	137 %
Modulus @ 23 °C (73 °F)	ASTM D-882	2850 MPa	2690 MPa	415 kpsi	390 kpsi
Tear Propagation	ASTM D-1922	10 gforce	10 gforce	0.022 lbf	0.022 lbf
Tear Resistance	ASTM D-1004	1200 gforce	1150 gforce	2.66 lbf	2.55 lbf
Electrical Properties					
Dielectric Strength	ASTM D-149	33	V/µm	830	V/mil
Dielectric Constant @ 1 kHz	ASTM D-150	3.15		3.15	
Dissipation Factor @ 1 kHz	ASTM D-150	$1 \cdot 10^{-3}$		$1 \cdot 10^{-3}$	

** Reported values were measured on a 30µm thick film*

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