

ULTEM®/POLYETHERIMIDE (PEI) - Glass-filled

KEY FEATURES

- Excellent Mechanical Strength
- Outstanding Heat Resistance
- Exceptional Resistance to Environmental Forces
- Inherent Flame Resistance with Low Smoke Evolution
- High Dielectrical Strength
- Low Dissipation Factor over a Wide Range of Frequencies
- Excellent Machinability and Finishing Characteristics

DESCRIPTION

Glass-filled ULTEM® is an amorphous thermoplastic polyetherimide (PEI) that has glass fibers added. This reinforcement provides greater tensile strength and rigidity than standard unfilled PEI while also improving dimensional stability.

TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
Physical	Chemical Designation			PEI	
	Filler		-	Glass Fibers	
	Density		g/cm ³	1.51	D792
Mechanical	Tensile Modulus	@ 73 °F	PSI	775,000	D638
	Tensile Strength @ Yld	@ 73 °F	PSI	19,000	D638
	Tensile Strength @ Brk	@ 73 °F	PSI	19,000	D638
	Shear Strength	@ 73 °F	PSI		
	Elongation @ Yld	@ 73 °F	%		
	Elongation @ Brk	@ 73 °F	%	3	D638
	Flexural Modulus	@ 73 °F	PSI	850,000	D790
	Flexural Strength	@ 73 °F	PSI	28,000	D790
	Compressive Modulus	@ 73 °F	PSI	450,000	D695
	Compressive Strength	@ 73 °F, 10% strain	PSI	25,500	D695
	Izod (charpy) Impact Strength	@ 73 °F	ft-lbs/in	1.1	D256
	Rockwell Hardness	@ 73 °F	M (R) Scale	110	D785
	Coefficient of Friction	Static			
Limiting PV			psi-fpm		

TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
Thermal	Vicat Softening Point		°F		
	Melting Temperature		°F		
	Heat Deflection Temperature	@ 66	°F	414	D648
	Heat Deflection Temperature	@ 264	°F	409	D648
	Service Temperature	Intermittent	°F	392	
	Service Temperature	Long Term	°F	356	
	Thermal Expansion (CLTE)		in/in/°F	1.1*10 ⁻⁵	D696
	Specific Heat		BTU/lb-°F		
	Thermal Conductivity		BTU-in/hr-ft ² -°F	1.56	D2214
Electrical	Surface Resistivity		ohms/square		
	Volume Resistivity		ohm-cm	3.0*10 ¹⁶	D257
	Dielectric Strength		V/mil	770	D149
	Dielectric Constant	@ 60 Hz, 73 °F 50% RH		3.7	D150
	Dissipation Factor	@ 60 Hz, 73 °F		0.0015	D150
Other	Moisture Absorption	@ 24 hrs, 73 °F	%	0.16	D570
	Moisture Absorption	@ Saturation, 73 °F	%	0.9	D570
	Flammability	UL 94		V-0	
	Food Grade			Y	
	Relative Cost			\$\$\$	

*The data stated above are typical values intended for reference and comparison purposes only.

*The data should not be used as a basis for design specifications or quality control.

*The information is provided as a guide to the best of our knowledge and given without obligation or liability.

*Testing under individual application circumstances is recommended.