

Ultem® Polyetheride (PEI)

TYPICAL PROPERTIES of ULTEM®			
ASTM or UL test	Property	Ultem® 1000 unfilled	Ultem® 2300 30% glass
PHYSICAL			
D792	Density (lb/in ³) (g/cm ³)	0.046 1.28	0.055 1.51
D570	Water Absorption, 24 hrs (%)	0.25	0.18
MECHANICAL			
D638	Tensile Strength (psi)	16,500	17,000
D638	Tensile Modulus (psi)	475,000	800,000
D638	Tensile Elongation at Break (%)	80	3.0
D790	Flexural Strength (psi)	20,000	30,000
D790	Flexural Modulus (psi)	500,000	900,000
D695	Compressive Strength (psi)	22,000	32,000
D695	Compressive Modulus (psi)	480,000	620,000
D785	Hardness, Rockwell	M112 / R125	M114 / R127
D256	IZOD Notched Impact (ft-lb/in)	0.5	1.0
THERMAL			
D696	Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F)	3.1	1.1
D648	Heat Deflection Temp (°F / °C) at 264 psi	392 / 200	410 / 210
D3418	Glass Transition Temp (°F / °C)	419 / 215	419 / 215
-	Max Operating Temp (°F / °C)	340 / 171	340 / 171
C177	Thermal Conductivity (BTU-in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C)	0.90 3.10	0.90 3.10
UL94	Flammability Rating	V-O	V-O
ELECTRICAL			
D149	Dielectric Strength (V/mil) short time, 1/8" thick	830	770
D150	Dielectric Constant at 1 MHz	3.15	3.70
D150	Dissipation Factor at 1 MHz	0.0013	0.0015
D257	Volume Resistivity (ohm-cm) at 50% RH	6.7 x 10 ¹⁷	3.0 x 10 ¹⁶

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