

**Quantum PEI - Ultem®**

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

**Material Notes:**

Information provided by Quantum Advanced Engineering Plastics

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Quantum-PEI-Ultem.php](http://www.lookpolymers.com/polymer_Quantum-PEI-Ultem.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.27 g/cc	1.27 g/cc	ASTM D792
Water Absorption	0.25 %	0.25 %	ASTM D570
Water Absorption at Saturation	1.25 %	1.25 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	109	109	ASTM D785
Hardness, Rockwell R	123	123	ASTM D785
Hardness, Shore D	93	93	ASTM 2240
Tensile Strength	105 MPa	15200 psi	ASTM D638
Elongation at Break	60 %	60 %	ASTM D638
Tensile Modulus	2.96 GPa	430 ksi	ASTM D638
Flexural Strength	152 MPa	22000 psi	ASTM D790
Flexural Modulus	3.31 GPa	480 ksi	ASTM D790
Compressive Strength	152 MPa	22000 psi	ASTM D695
Compressive Modulus	3.31 GPa	480 ksi	ASTM D695
Shear Strength	103 MPa	15000 psi	ASTM D732
Izod Impact, Notched	0.534 J/cm	1.00 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	55.8 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	31.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
Thermal Conductivity	0.144 W/m-K	1.00 BTU-in/hr-ft <sup>2</sup> -°F	ASTM C177
Melting Point	238 °C	460 °F	ASTM D3417
Maximum Service Temperature, Air	171 °C	340 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	200 °C	392 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	ASTM D648
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.15	3.15	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	32.7 kV/mm	830 kV/in	ASTM D149
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
FDA Compliance	yes	

## Contact Songhan Plastic Technology Co.,Ltd.

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