

TYPICAL ROOM TEMPERATURE PROPERTIES OF POLYETHERIMIDE (PEI)

Ranges indicate properties dependent on grade.

— TEST METHOD —		Property	VALUE	
ISO	ASTM		SI	English
1183	D792	Specific gravity	1.3-1.5	1.3-1.5
527	D638	Tensile strength	105 MPa	16.5-17 kpsi
527	D638	Elongation at break (%)	2-80	2-80
527	D638	Tensile modulus	3.3-5.9 GPa	0.48-0.85 Mpsi
178	D790	Flexural modulus	3.4-6.2 GPa	0.50-0.90 Mpsi
604	D695	Compressive modulus	3.3-4.1 GPa	0.48-0.60 Mpsi
180/1A	D256	Notched Izod impact	3.5 J/m ²	0.5-1.0 ft-lb/in ²
2039-2	D785	Hardness, Rockwell	M112-M115	M112-M115
—	—	Coefficient of friction dynamic	0.18-0.42	0.18-0.42
—	E831 (TMA)	Coefficient of linear thermal expansion × 10⁻⁵	2.0-5.6 mm/mm-°C	1.1-3.1 in/in-°F
75	D648	Heat deflection temperature At 1.8 MPa (264 psi)	190-210°C	390-410°F
E1356	D1356	Glass transition temperature	215°C	419°F
—	—	Continuous service temperature in air	170°C	338°F
—	UL 94	Flammability At 3.1 mm (.125") estimated	V-0	V-0
IEC243	D149	Dielectric strength	conductive – 27 kV/mm	conductive – 830 V/mil
IEC93	D257	Volume resistivity	10 ⁴ -7×10 ¹⁷ ohm-cm	10 ⁴ -2×10 ¹⁸ ohm-in
IEC250	D150	Dielectric constant At 1 MHz	conductive – 3.0	conductive – 3.0
IEC250	D150	Dissipation factor At 1 MHz	conductive – 0.0013	conductive – 0.0013
62	D570	Water absorption, 24 h, 1/8-in thk (%)	0.18-0.54	0.18-0.54

Taken from *Engineering Plastic Products – Stock Shapes for Machining*, Quadrant Engineering Plastic Products, 1996.