



Duratron D7000 PI (Quadrant)

Unfilled Polyimide

Physical Properties	Metric	English	Comments
Specific Gravity	1.37 g/cc	0.0495 lb/in ³	ASTM D792
Water Absorption	0.7 %	0.7 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	3.8 %	3.8 %	ASTM D570(2)
Mechanical Properties			
Hardness, Rockwell R	128	128	ASTM D785
Hardness, Shore D	90	90	ASTM D2240
Tensile Strength, Ultimate	121 MPa	17500 psi	ASTM D638
Elongation at Break	6 %	6 %	ASTM D638
Tensile Modulus	3.72 GPa	540 ksi	ASTM D638
Flexural Modulus	3.79 GPa	550 ksi	ASTM D790
Flexural Yield Strength	172 MPa	25000 psi	ASTM D790
Compressive Strength	186 MPa	27000 psi	10% Def., 73°F; ASTM D695
Compressive Modulus	2.62 GPa	380 ksi	ASTM D695
Shear Strength	110 MPa	16000 psi	ASTM D732
Coefficient of Friction	0.29	0.29	Dry vs. Steel; QTM 55007
K (wear) Factor	302 x 10 ⁻⁸ mm ³ /N-M	150 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	QTM55010
Limiting Pressure Velocity	0.525 MPa-m/sec	15000 psi-ft/min	4:1 safety factor; QTM 55007
Izod Impact, Notched	0.534 J/cm	1 ft-lb/in	ASTM 256 Type A
Electrical Properties			
Surface Resistivity per Square	Min 1e+013 ohm	Min 1e+013 ohm	EOS/ESD S11.11
Dielectric Constant	3.2	3.2	1 MHz; ASTM D150
Dielectric Strength	15.6 kV/mm	395 V/mil	Short Term; ASTM D149
Dissipation Factor	0.005	0.005	1 MHz; ASTM D150
Thermal Properties			
CTE, linear 68°F	40.5 μm/m-°C	22.5 μin/in-°F	(-40°F to 300°F); ASTM E831
Thermal Conductivity	0.216 W/m-K	1.5 BTU-in/hr-ft ² -°F	ASTM E1530
Maximum Service Temperature, Air	260 °C	500 °F	Continuous
Deflection Temperature at 1.8 MPa (264 psi)	354 °C	670 °F	ASTM D648
Glass Temperature	366 °C	690 °F	ASTM D3418
Flammability, UL94 (Estimated Rating)	V-0	V-0	3.1 mm (1/8 in.)

All statements, technical information and recommendations contained in this database are presented in good faith, based upon tests believed to be reliable and practical field experience. The reader is cautioned, however, that Quadrant EPP and Automation Creations, Inc. cannot guarantee the accuracy or completeness of this information, and it is the customer's responsibility to determine the suitability of Quadrant EPP's products in any given application.