Nylatron WP PA6 (Quadrant)

Self-lubricating, Cast Nylon, Wear Pad material

Material Notes:
Quadrant's wear resistant grade of cast nylon optimized for linear bearing applications. Offers an ideal combination of value and performance.

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 g/cc	0.0415 lb/in³	ASTM D792
Water Absorption	0.3 %	0.3 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	7 %	7 %	Immersion; ASTM D570(2)
Mechanical Properties			
Hardness, Rockwell M	80	80	ASTM D785
Hardness, Rockwell R	110	110	ASTM D785
Hardness, Shore D	85	85	ASTM D2240
Tensile Strength, Ultimate	72.4 MPa	10500 psi	ASTM D638
Elongation at Break	20 %	20 %	ASTM D638
Tensile Modulus	2.9 GPa	420 ksi	ASTM D638
Flexural Modulus	3.1 GPa	450 ksi	ASTM D790
Flexural Yield Strength	110 MPa	16000 psi	ASTM D790
Compressive Strength	96.5 MPa	14000 psi	10% Def.; ASTM D695
Compressive Modulus	2.76 GPa	400 ksi	ASTM D695
Shear Strength	68.9 MPa	10000 psi	ASTM D732
Coefficient of Friction	0.18	0.18	Dry vs. Steel; QTM55007
K (wear) Factor	60.4×10^{-8} mm³/N-M	30×10^{-10} in³-min/ft-lb-hr	QTM 55010
Limiting Pressure Velocity	0.473 MPa-m/sec	13500 psi-ft/min	4:1 safety factor; QTM 55007
Izod Impact, Notched	0.267 J/cm	0.5 ft-lb/in	ASTM D256 Type A
Electrical Properties			
Surface Resistivity per Square	Min 1e+013 ohm	Min 1e+013 ohm	EOS/ESD S11.11
Thermal Properties			
CTE, linear 68°F	99 µm/m-°C	55 µin/in-°F	(-40°F to 300°F); ASTM E831
Melting Point	216 °C	420 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	104 °C	220 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	93.3 °C	200 °F	ASTM D648
Flammability, UL94 (Estimated Rating)	V-2	V-2	1/8 inch