

Quantum Nylon 6/6

Category : Polymer , Thermoplastic , Nylon , Nylon 66

Material Notes:

Information provided by Quantum Advanced Engineering Plastics

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quantum-Nylon-66.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	ASTM D792
Water Absorption	1.2 %	1.2 %	ASTM D570
Water Absorption at Saturation	8.5 %	8.5 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ASTM D785
Hardness, Rockwell R	120	120	ASTM D785
Tensile Strength	82.7 MPa	12000 psi	ASTM D638
Elongation at Break	60 %	60 %	ASTM D638
Tensile Modulus	2.83 GPa	410 ksi	ASTM D638
Flexural Strength	103 MPa	15000 psi	ASTM D790
Flexural Modulus	2.76 GPa	401 ksi	ASTM D790
Compressive Strength	86.2 MPa	12500 psi	ASTM D695
Compressive Modulus	2.90 GPa	420 ksi	ASTM D695
Shear Strength	68.9 MPa	10000 psi	ASTM D732
Izod Impact, Notched	0.320 J/cm	0.600 ft-lb/in	ASTM D256
Coefficient of Friction	0.25	0.25	

Thermal Properties	Metric	English	Comments
CTE, linear	72.0 - 79.2 $\mu\text{m}/\text{m}\cdot\text{°C}$	40.0 - 44.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM D696
Thermal Conductivity	0.245 W/m-K	1.70 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	260 °C	500 °F	ASTM D3417
Maximum Service Temperature, Air	104 °C	220 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	113 °C	235 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	91.7 °C	197 °F	ASTM D648
Flammability, UL94	V-2	V-2	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	3.6	3.6	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.030	0.030	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
FDA Compliance	yes	

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