

Quantum Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Information provided by Quantum Advanced Engineering Plastics

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quantum-Polycarbonate.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Water Absorption	0.15 %	0.15 %	ASTM D570
Water Absorption at Saturation	0.35 %	0.35 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	72	72	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength	68.9 MPa	10000 psi	ASTM D638
Elongation at Break	75 %	75 %	ASTM D638
Tensile Modulus	2.24 GPa	325 ksi	ASTM D638
Flexural Strength	89.6 MPa	13000 psi	ASTM D790
Flexural Modulus	2.34 GPa	340 ksi	ASTM D790
Compressive Strength	82.7 MPa	12000 psi	ASTM D695
Shear Strength	62.1 MPa	9000 psi	ASTM D732
Izod Impact, Notched	9.08 J/cm	17.0 ft-lb/in	ASTM D256
Coefficient of Friction	0.38	0.38	

Thermal Properties	Metric	English	Comments
CTE, linear	68.4 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	38.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
Thermal Conductivity	0.187 W/m-K	1.30 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	154 °C	310 °F	ASTM D3417
Maximum Service Temperature, Air	121 °C	250 °F	
Deflection Temperature at 0.46 MPa	146 °C	295 °F	

Thermal Properties	Metric	English	ASTM D648 Comments
Deflection Temperature at 1.8 MPa (264 psi)	132 °C	270 °F	ASTM D648
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	ASTM D257
Dielectric Constant	3.1	3.1	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	15.0 kV/mm	380 kV/in	ASTM D149
Dissipation Factor	0.0060	0.0060	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
FDA Compliance	no	

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