

Quantum PET

Category : Polymer , Thermoplastic , Polyester, TP , Polyethylene Terephthalate (PET)

Material Notes:

Information provided by Quantum Advanced Engineering Plastics

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D792
Water Absorption	0.10 %	0.10 %	ASTM D570
Water Absorption at Saturation	0.70 %	0.70 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	95	95	ASTM D785
Hardness, Rockwell R	120	120	ASTM D785
Hardness, Shore D	86	86	ASTM 2240
Tensile Strength	79.3 MPa	11500 psi	ASTM D638
Elongation at Break	50 %	50 %	ASTM D638
Tensile Modulus	2.76 GPa	400 ksi	ASTM D638
Flexural Strength	103 MPa	15000 psi	ASTM D790
Flexural Modulus	2.76 GPa	400 ksi	ASTM D790
Compressive Strength	103 MPa	15000 psi	ASTM D695
Compressive Modulus	2.90 GPa	420 ksi	ASTM D695
Shear Strength	55.2 MPa	8000 psi	ASTM D732
Izod Impact, Notched	0.267 J/cm	0.500 ft-lb/in	ASTM D256
Coefficient of Friction	0.20	0.20	

Thermal Properties	Metric	English	Comments
CTE, linear	59.4 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	33.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
Thermal Conductivity	0.259 W/m-K	1.80 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	254 °C	490 °F	ASTM D3417

Thermal Properties <small>Temperature, Air</small>	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	116 °C	240 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	79.4 °C	175 °F	ASTM D648
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	15.4 kV/mm	390 kV/in	ASTM D149
Dissipation Factor	0.020 @Frequency 1.00e+6 Hz	0.020 @Frequency 1.00e+6 Hz	ASTM D150

Descriptive Properties	Value	Comments
FDA Compliance	yes	

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