

Quantum PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

Information provided by Quantum Advanced Engineering Plastics

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Water Absorption	0.25 %	0.25 %	ASTM D570
Water Absorption at Saturation	0.40 %	0.40 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	72	72	ASTM D785
Hardness, Shore D	87	87	ASTM 2240
Tensile Strength	55.2 MPa	8000 psi	ASTM D638
Elongation at Break	100 %	100 %	ASTM D638
Tensile Modulus	1.72 GPa	250 ksi	ASTM D638
Flexural Strength	41.4 MPa	6000 psi	ASTM D790
Flexural Modulus	2.00 GPa	290 ksi	ASTM D790
Compressive Strength	72.4 MPa	10500 psi	ASTM D695
Izod Impact, Notched	0.320 J/cm	0.600 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	72.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	40.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
Thermal Conductivity	0.202 W/m-K	1.40 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	221 °C	430 °F	ASTM D3417
Maximum Service Temperature, Air	104 °C	220 °F	
Deflection Temperature at 0.46 MPa (66 psi)	160 °C	320 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	79.4 °C	175 °F	ASTM D648

Flammability UL 94 Thermal Properties	HB Metric	HB English	Comments
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Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{13}$ ohm-cm	$\geq 1.00 \times 10^{13}$ ohm-cm	ASTM D257
Dielectric Constant	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	15.7 kV/mm	400 kV/in	ASTM D149

Descriptive Properties	Value	Comments
FDA Compliance	yes	

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