

Quantum PEEK 30% Carbon Filled

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Carbon Fiber Filled

Material Notes:

Information provided by Quantum Advanced Engineering Plastics

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quantum-PEEK-30-Carbon-Filled.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.40 g/cc	1.40 g/cc	ASTM D792
Water Absorption	0.10 %	0.10 %	ASTM D570
Water Absorption at Saturation	0.30 %	0.30 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	102	102	ASTM D785
Hardness, Rockwell R	124	124	ASTM D785
Hardness, Shore D	86	86	ASTM 2240
Tensile Strength	138 MPa	20000 psi	ASTM D638
Elongation at Break	5.0 %	5.0 %	ASTM D638
Tensile Modulus	7.58 GPa	1100 ksi	ASTM D638
Flexural Strength	172 MPa	25000 psi	ASTM D790
Flexural Modulus	9.31 GPa	1350 ksi	ASTM D790
Compressive Strength	207 MPa	30000 psi	ASTM D695
Izod Impact, Notched	0.694 J/cm	1.30 ft-lb/in	ASTM D256
Coefficient of Friction	0.20	0.20	

Thermal Properties	Metric	English	Comments
CTE, linear	19.8 $\mu\text{m/m-}^{\circ}\text{C}$	11.0 $\mu\text{in/in-}^{\circ}\text{F}$	ASTM D696
Thermal Conductivity	0.908 W/m-K	6.30 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	340 °C	644 °F	ASTM D3417
Maximum Service Temperature, Air	249 °C	480 °F	
Deflection Temperature at 1.8 MPa	277 °C	530 °F	

(264 psi) Thermal Properties	Metric	English	ASTM D648 Comments
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 1e+05	<= 1e+05	ASTM D257
Dielectric Constant	3.3 @Frequency 1.00e+6 Hz	3.3 @Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	1.26 kV/mm	32.0 kV/in	ASTM D149

Descriptive Properties	Value	Comments
FDA Compliance	no	

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