

Zeus PEEK Tubing

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Unreinforced

Material Notes:

PEEK (polyetheretherketone) is a high-performance engineered polymer with excellent endurance to heat and one of the highest strength-to-weight ratios of any thermoplastic. This material can be used as an alternative to other materials, such as aluminum, steel, glass and other polymers. PEEK is very strong while having excellent lubricity and purity for demanding applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Zeus-PEEK-Tubing.php

Physical Properties	Metric	English	Comments
Density	<= 1.48 g/cc	<= 0.0535 lb/in ³	ASTM D792
Water Absorption	0.10 - 0.45 %	0.10 - 0.45 %	ASTM D257
Crystallinity	25 - 35 %	25 - 35 %	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	>= 85	>= 85	ASTM D2240
Tensile Strength, Ultimate	75.0 - 97.0 MPa	10900 - 14100 psi	ASTM D638
Elongation at Break	96 - 110 %	96 - 110 %	ASTM D638
Modulus of Elasticity	2.30 - 4.30 GPa	334 - 624 ksi	ASTM D638
Flexural Modulus	3.60 - 4.10 GPa	522 - 595 ksi	ASTM D790
Coefficient of Friction	0.34	0.34	

Thermal Properties	Metric	English	Comments
CTE, linear	47.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	26.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft ² - °F	ASTM C177
Melting Point	343 °C	649 °F	
Maximum Service Temperature, Air	250 - 260 °C	482 - 500 °F	
Glass Transition Temp, Tg	143 °C	289 °F	
Decomposition Temperature	540 °C	1000 °F	ASTM E1131
Oxygen Index	35 %	35 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	4.90e+16 ohm-cm	4.90e+16 ohm-cm	ASTM D257
Dielectric Constant	2.2 - 2.8	2.2 - 2.8	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	19.7 kV/mm	500 kV/in	ASTM D149

Descriptive Properties	Value	Comments
Radiation Resistance (MRad)	1000	

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