

PEEK

Filament Product Specification

PEEK (polyetheretherketone) is one of the highest performing semi-crystalline thermoplastics available today. PEEK Offers a combination of properties that allow it to replace metal in some of the most severe end-use environments. PEEK is one of the most chemically resistant plastics and offers excellent strength, superior fatigue resistance at a continuous-use temperature of 240°C (464°F).

PEEK has exceptional chemical resistance to organics, acids and bases; high mechanical strength in excess of 250°C (482°F); very good wear and abrasion resistance; best-in-class fatigue resistance; excellent dimensional stability; excellent resistance to hydrolysis; superior dielectric with low loss at high temperatures and frequencies.

	MECHANICAL PROPERTIES	Test Method	Build Orientation		Infill Density
			xz	xy	
TENSILE	Tensile Strength Ultimate	ASTM D638	89 MPa	86 MPa	100%
	Tensile Modulus	ASTM D638	3.4 GPa	3.3 GPa	
	Tensile Elongation at Break (%)	ASTM D638	3.78	3.62	
FLEXURAL	Flexural Strength (at yield 23°C)	ASTM D790	-	120 MPa	100%
	Flexural Modulus (at 23°C)	ASTM D790	-	3.5 GPa	

THERMAL PROPERTIES	Test Method	Value
Glass Transition Temperature (°C)	ISO 11357-2	143°C
HDT (load 1.82 MPa)	ISO 75	160°C
Melting Point DSC	ISO 11357-3	343°C

OTHERS	Test Method	Value
Density	ISO 1183	1.30g/cm ³
Water Absorption	ISO 62	0.45%
Volume Resistivity	IEC 60093	1.00e+16 ohm*cm


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Typical applications

Aircraft hardware and fasteners and mechanical components • Automotive electrical/electronic transmission/powertrain and gears • Coatings; composites; additives • Wire and cable insulation; Semiconductor fabrication and testing • Medical devices • Dental cassettes and devices • Oil and gas process equipment.

Support and **advice** on: Metal Alternative • Prototype • End Use Parts
with the latest in **additive manufacturing technologies**

INDUSTRIES	PEEK	PEEK_CF	PA_CF
AEROSPACE AND DEFENCE	●	●	
AUTOMOTIVE	●	●	●
OIL AND GAS	●	●	
MANUFACTURING	●	●	●
ELECTRONICS	●		
PLASTICS	●		●
MOTORSPORT	●	●	●

 **CONTACT US NOW** to discuss your requirements and to get full data sheets on these and other filament materials

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Product specifications are subject to change without notice. The information presented are typical values intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. Actual values will vary with build conditions. Performance characteristics may vary according to application or operating conditions. Users are responsible for ensuring the material is technically suitable, safe and lawful for the intended application and for disposal/recycling consistent with applicable environmental laws and regulations.