

Roboze Peek

PEEK is a thermoplastic material for special production of functional parts

FILAMENT PRODUCT SPECIFICATION

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

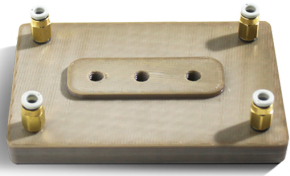
Exceptional chemical resistance to organics, acids and bases; High mechanical strength in excess of 250°C (482°F); very good wear and abrasion resistance; Best-in class fatigue resistance; Excellent dimensional stability; Excellent resistance to hydrolysis ; Superior dielectric with low loss at high temperatures and frequencies.

Typical Applications are:

Aircraft Hardware and fasteners; Aircraft mechanical components; Automotive electrical/electronic; Transmissions/powertrain; Coatings, composites, additives; Wire and cable insulation; Semiconductor fabrication and testing; Medical devices; Dental cassettes and devices; Oil and gas process equipment; Gears.

	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
Heat Deflection (HDT) with load of 1.82 MPa	ISO 75	160°C
Melting Point DSC	ISO 11357-3	343°C
Continuous Use Temp.	UL 746 B	240°C



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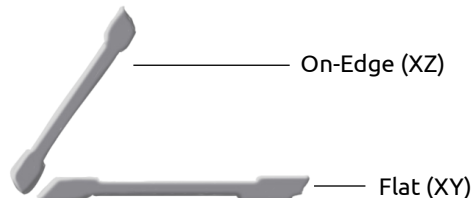
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OTHERS	Test Method	Value
Density	ISO 1183	1,30 g/cm ³
Water Absorption	ISO 62	0,45 %
Volume Resistivity	IEC 60093	1,00 e+16 ohm*cm
Flammability behaviour test method	UL 94	V-0

TEST SPECIMENT SETTING FOR MECHANICAL TESTING

All tests have been made with printed sample in two different orientations: flat and on edge.

XZ= X or "on edge"
XY= Y or "flat"



The performance characteristics of these materials may vary according to application, end use, or operating conditions. Each user is responsible for determining that the Roboze material is safe, technically suitable, and lawful for the intended application, as well as for identifying the proper disposal (or recycling) method consistent with applicable environmental laws and regulations.

The information presented in this document 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. Tested parts were built on ROBOZE PLUS 400. Product specifications are subject to change without notice.

Your Smart Solution

Roboze machines are designed to optimize time, reduce costs, and speed up time to market. Our high performing materials are engineered to empower you with unlimited possibilities for all kinds of projects.

The Only Beltless System

Roboze Beltless technology is years ahead in innovation. The patented mechatronic movement system of the X and Y-axes, which directly connects rack and pinion, achieves never before seen real 25-micron layer tolerances.

Find our more on advanced Roboze solutions at **roboze.com** and get in touch with our experts.

See It To Believe It

Request a free sample and see for yourself what you can create with our technology and super techno-polymers.

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