

ePEEK Pro

Technical Data Sheet

Special plastic materials with excellent mechanical and thermal properties; high strength, high toughness, impact resistance; self-lubricating and wear-resistant properties, printable mechanical gears; flame retardant; resistant to corrosion by most chemical reagents and solvents; high temperature resistance Performance, the heat distortion temperature is as high as 205°C, and it can be used for heat-resistant parts.

Material Status	Mass Production
Characteristics	<ul style="list-style-type: none"> • Chemical resistance • Heat resistance • Flame retardant • High toughness • High impact resistance • Abrasion resistance
Applications	<ul style="list-style-type: none"> • Aerospace industry • Automotive industry • Healthcare oil and gas industry • Oil and gas industry • Semiconductor industry
Form	<ul style="list-style-type: none"> • Filament
Processing method	<ul style="list-style-type: none"> • 3D Print, FDM Print

	Testing method	Typical value
Physical Properties		
Density	GB/T 1033	1.3 g/cm ³
Melt Flow Index	GB/T 3682	14.3 (190°C/2.16kg)
Mechanical Properties		
Tensile Strength	GB/T 1040	80.75 MPa
Elongation at Break	GB/T 1040	N/A
Flexural Strength	GB/T 9341	30 MPa
Flexural Modulus	GB/T 9341	N/A
IZOD Impact Strength	GB/T 1843	N/A
Thermal Properties		
Heat distortion Temperature	GB/T 1634	205 (°C,0.45MPa)
Continuous Service Temperature	IEC 60216	N/A
Maximum (short term) Use Temperature		N/A
Electrical Properties		
Insulation Resistance	DIN IEC 60167	N/A
Surface Resistance	DIN IEC 60093	N/A

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Recommended printing parameters

Extruder Temperature	400-450°C
Build Platform Temperature	130°C
Fan Speed	0%
Printing Speed	40 - 60mm/s

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2. Printing conditions may vary with different nozzle diameters

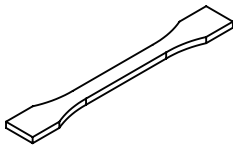
Drying Recommendations

N/A

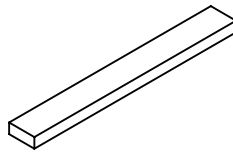
Notes

- 1.It's better to dry the ePC filament before printing(70°C/>6H).the eBOX is suggested to use when printing the ePC filament.
- 2.The shinkage of ePeeK Pro material is high.So pls use printer which has chamber to print the ePeeK Pro filament.
- 3.ePEEK Pro is prone to warping when printing. Pls increase thechamber temperature and plate temperature ; choose a bottom plate with high flatness and high temperature resistance; Leveling is required before printing
4. Uneven crystallization of ePEEK Pro material may occur during the printing process. Try to increase the chamber temperature and reduce the cooling speed of the PEEK material; if necessary, an oven is required for post-annealing. Annealing after printing can improve mechanical performance. Put it in the oven 150 °C/1h→200°C/1h→150°C/0.5h.

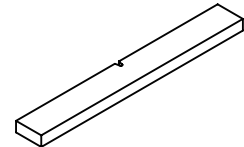
Mechanical Properties



Tensile testing specimen GB/T 1040



Flexural testing specimen GB/T 9341



Impact testing specimen GB/T 1043

The physical properties, mechanical properties, thermal properties, and electrical properties of the filament are obtained based on the injection molding spline test.

Print test condition:

Extruder Temperature	350-450°C
Build Platform Temperature	130°C
Outline/Perimeter Shells	4
Top/Bottom Layers	4
Infill Percentage	20%
Fan speed	0%
Printing speed	40mm/s

Based on 0.4 mm nozzle and Simplify 3D v.4.1.2.

Notice

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