

TECHNICAL DATA SHEET

PEEK CF

BRIEF INTRODUCTION

PEEK-CF is a carbon-fiber reinforced PEEK material, features high strength, rigidity, and high-temperature resistance property. Extremely light and strong, an ideal filament for printing parts to replace metal parts in many occasions. The printed parts has excellent inter-layer adhesion and surface quality. Widely used in the applications need light and high strength, wear resistance, corrosion resistance, flame retardant or temperature resistant.

CHARACTERISTIC

Excellent heat resistance high strength excellent chemical resistance flame

resistance

IDENTFICATION OF THE MATERIAL

Trade name	PEEK CF Carbon fiber
Chemical name	Polyetheretherketone
Application	3D PRINTING
GUIDELINE FOR PRINT SETTINGS	
Nozzle temperature	425±25℃
Bed temperature	100~150 ℃
Chamber temperature	80-140 ℃
Bed modification	NO
Active cooling fan	OFF
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	20~40mm/s

Settings are based on a 0.4mm nozzle.

MATERIAL PROPERTIES		Test Method
Melt temperature	~340 ℃	ISO 11357
Melt flow rate (MFR) ¹	10~15 g/10min	ISO 1133
Heat deflection temperature(HDT) ₂	~200 ℃	ISO 75
Vicat softening temperature(VST) ³	1	ISO 306
Density	1.15 g/cm ³	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/
1. Test conditions: T= 380℃; m= 5kg.		

2. Test conditions:0.45MPa;120℃/h.

3. Test conditions:10N; 120°C/h.



MECHANICAL PROPERTIES TENSILE TEST All test specimens were printed using an INTAMSYS FUNMAT HT,	Test Method ISO 527
under the following conditions:	
Printing temperature: 420 $^\circ\!\mathrm{C}$	
Heated bed temperature: 120℃ Chamber temperature: 80℃ Print speed: 20 mm/s	
Shell thickness: 0.8mm	
Infill under 45. Infill	100%
Tensile strength(Mpa)	85~90
Elongation at break (%)	3~6
The same conditions as tensile test. 1→Impact direction	
Infill	100%
Impact strength(KJ/m ²)	30~35
Notch impact strength ¹ (KJ/m ²)	8~12
IECHANICAL PROPERTIES FLEXURAL TES	Test Method ISO 178
The same conditions as tensile test.	
1→Bending direction	
Infill	100%
Infill Maximum force(Mpa)	100% 120~130

1. Notch Type: Type A



FILAMENT SPECIFICATION		Test Method
Diameter 1.75mm	1.75±0.03mm	EX1125
Max roundness deviation (1.75)	0.03mm	EX1125
Net weight on reel	1kg	EX1125

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