

TECHNICAL DATA SHEET

KEXCELLED PEEK K10

Product code:	Revision Number:	Revision date:	TDS No.:
PEEK K10	03	17/01/2022	KT047

Characteristic:

Excellent heat resistance | high strength | chemical resistance | excellent toughness | flame resistance | biocompatibility

IDENTIFICATION OF THE MATERIAL

Trade name	PEEK K10
Chemical name	Polyetheretherketone
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	400~450°C
Bed temperature	110~220°C
Chamber temperature	40~60°C or 90~200°C
Bed modification	NO
Active cooling fan	0~100%
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	30~60mm/s

Settings are based on a 0.4mm nozzle.

MATERIAL PROPERTIES

		Test Method
Melt temperature	~340°C	ISO 11357
Melt flow rate (MFR)¹	14~18 g/10min	ISO 1133
Heat deflection temperature(HDT)²	150°C (amorphous state) 170 °C (crystalline state)	ISO 75
Vicat softening temperature(VST)³	/	ISO 306
density	1.28g/cm ³	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1. test conditions: T= 380°C; m= 5kg.

2. test conditions: 0.45MPa; 120°C/h.

3. test conditions: 10N; 120°C/h.

MECHANICAL PROPERTIES|TENSILE TEST
Test Method ISO 527

All test specimens were printed using an INTAMSYS FUNMAT HT under the following conditions:

Printing temperature: 405°C

Heated bed temperature: 100°C

Chamber temperature: 50°C

Print speed: 50mm/s

Shell thickness: 1.2mm

Infill under 45°



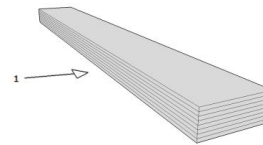
Printed horizontal X,Y-axis

Infill	100%
Tensile strength (Mpa)	70~80
Elongation at break (%)	4~6
E modulus (Mpa)	4200~4500

MECHANICAL PROPERTIES|IMPACT TEST
Test Method ISO 179

The same conditions as tensile test.

1→impact direction

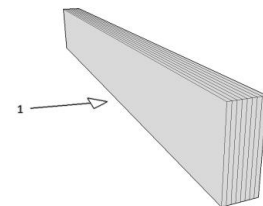


Infill	100%
Impact strength (KJ/m ²)	60~70
Notch impact strength ¹ (KJ/m ²)	14~18

MECHANICAL PROPERTIES |FLEXURAL TEST
Test Method ISO 178

The same conditions as tensile test.

1→bending direction



Infill	100%
Maximum force (Mpa)	110~120
Flexural modulus (Mpa)	2400~2600

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