TECHNICAL DATA SHEET

KEXCELLED PAHT K7CF

Product code:	Revision Number:	Revision date:	TDS No.:
PAHT K7CF	02	13/01/2022	KT04.20.4102

Characteristic:

High strength|high heat resistance|lower shrinkage

IDENTFICATION OF THE MATERIAL	
Trade name	PAHT K7CF
Chemical name	Carbon fiber reinforced polyamide 6
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS	
Nozzle temperature	270~300℃
Bed temperature	70~100℃
Bed modification	Tape or glue
Active cooling fan	OFF
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	40-80mm/s

Settings are based on a 0.4mm nozzle.

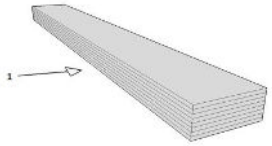
MATERIAL PROPERTIES		Test Method
Melt temperature	~230℃	ISO 11357
Melt flow rate (MFR) [1]	20~25g/10min	ISO 1133
Heat deflection temperature(HDT) [2]	180℃	ISO 75
Vicat softening temperature(VST) [3]	214℃	ISO 306
density	1.15g/cm^3	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

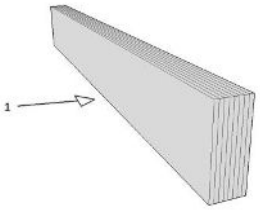
1.test conditions: T= 270℃; m= 2.16kg.

2. test conditions:0.45MPa;120℃/h.

3. test conditions:10N; 120℃/h.

MECHANICAL PROPERTIES|TENSILE TEST	Test Method ISO 527
All test specimens were printed using an FlashForge Guider 2s under the following conditions： Printing temperature: 280℃ Heated bed temperature：100℃ Print speed：50mm/s Shell thickness：1.2mm Infill under 45°	
	Printed horizontal X,Y-axis
Infill	100%
Tensile strength（Mpa）	80~110
Elongation at break（%）	2~4
Emodulus（Mpa）	6000~8000

MECHANICAL PROPERTIES|IMPACT TEST	Test Method ISO 179
The same conditions as tensile test. 1→impact direction	
Infill	100%
Impact strength（KJ/m^2）	20~30
Notch impact strength[1]（KJ/m^2）	4~6

MECHANICAL PROPERTIES |FLEXURAL TEST	Test Method ISO 178
The same conditions as tensile test. 1→bending direction	
Infill	100%
Maximum force（Mpa）	110~130
Flexural modulus（Mpa）	5000~6000

1. notch type: type A

*The mechanical properties of nylon and Its HDT have a great relationship with its water absorption rate.This table shows its performance in its dry state.

FILAMENT SPECIFICATION		Test Method
Diameter 1.75mm	1.75±0.03mm	EX1125
Diameter 2.85mm	2.85±0.03mm	EX1125
Max roundness deviation（1.75）	0.03mm	EX1125
Max roundness deviation（2.85）	0.03mm	EX1125
Net weight on reel	1kg	EX1125