TECHNICAL DATA SHEET

KEXCELLED THE K7™ PET CF10

Product code:	Revision Number:	Revision date:	TDS No.:
THE K7™ PET CF10	05	11/01/2024	KT037

Characteristic:

High speed printing|high rigidity|high heat resistance|no buckling deformation

IDENTFICATION OF THE MATERIAL	
Trade name	THE K7™ PET CF10
Chemical name	Carbon fiber reinforced polyethylene glycol terephthalate
Use	3D Printing
Origin	KEXCELLED
GUIDELINE FOR PRINT SETTINGS	
Nozzle temperature	270~300℃
Bed temperature	70~100℃
Bed modification	NO
Active cooling fan	OFF
Layer height	0.2mm
Shell thickness	≥1.2mm
Print speed	40~250mm/s

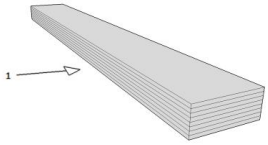
Settings are based on a 0.4mm nozzle.

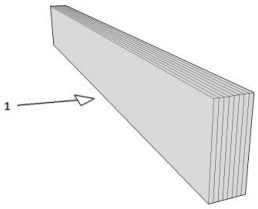
MATERIAL PROPERTIES		Test Method
Melt flow rate (MFR) [1]	40~50g/10min	ISO 1133
Heat deflection temperature(HDT) [2]	102℃	ISO 75
density	1.32g/cm^3	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1.test conditions: T= 275℃; m= 2.16kg.

2. test conditions:0.45MPa;120℃/h.

MECHANICAL PROPERTIES|TENSILE TEST	Test Method ISO 527
All test specimens were printed using an Bambu Lab X1C under the following conditions： Printing temperature: 290℃ Heated bed temperature：100℃ Print speed：100mm/s Shell thickness：1.2mm Infill under 45°	
	Printed horizontal X,Y-axis
Infill	100%
Tensile strength（Mpa）	65~75
Elongation at break（%）	4~8
Emodulus（Mpa）	4000~6000

MECHANICAL PROPERTIES|IMPACT TEST	Test Method ISO 179
The same conditions as tensile test. 1→impact direction	
Infill	100%
Impact strength（KJ/m^2）	15~35
Notch impact strength[1]（KJ/m^2）	3~8

MECHANICAL PROPERTIES |FLEXURAL TEST	Test Method ISO 178
The same conditions as tensile test. 1→bending direction	
Infill	100%
Maximum force（Mpa）	120~130
Flexural modulus（Mpa）	4000~5000

1. notch type: type A

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