TECHNICAL DATA SHEET

KEXCELLED THE K10™ PPS CF10

Product code:	Revision Number：	Revision date:	TDS No.:
THE K10™ PPS CF10	01	19/3/2024	KT079

BRIEF INTRODUCTION

Filament suitable for all commercially available leading brands FDM/FFF Printers.

Characteristic:

Carbon fiber reinforced|High rigidity|High temperature resistance.

IDENTFICATION OF THE MATERIAL	
Trade name	THE K10™ PPS CF10
Chemical name	Polyphenylene sulfide
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS	
Nozzle temperature	310-350℃
Bed temperature	100℃
Bed modification	NO
Active cooling fan	0~50%
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	30-60mm/s

Settings are based on a 0.4mm nozzle.

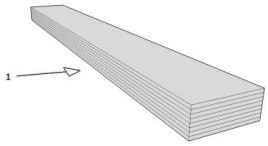
MATERIAL PROPERTIES		Test Method
Melt flow rate (MFR) [1]	55-65g/10min	/
Heat deflection temperature(HDT)[2]	242.7℃	ISO 75
Vicat softening temperature(VST)[3]	268℃	ISO 306
density	1.3g/cm^3	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

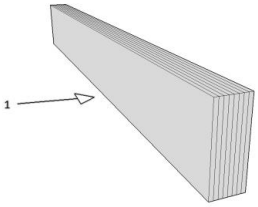
1.test conditions: T= 316℃; m= 5kg.

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 a INTAMSYS HT under the following conditions： Printing temperature: 350℃ Heated bed temperature：100℃ Print speed：60mm/s Shell thickness：1.2mm Infill under 45°	
	Printed horizontal X,Y-axis
Infill	100%
Tensile strength（Mpa）	55~65
Elongation at break（%）	4~8
Emodulus（Mpa）	4500~5000

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）	9~12

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

1. notch type: type A

FILAMENT SPECIFICATION		Test Method
Diameter 1.75mm	1.75±0.05mm	EX1125
Max roundness deviation（1.75）	0.05mm	EX1125
Net weight on reel	0.75kg	EX1125