

TECHNICAL DATA SHEET

KEXCELLED THE K9™ PC FR

Product code:	Revision Number:	Revision date:	TDS No.:
THE K9™ PC FR	01	26/02/2025	KT083

Characteristic:

High liquidity | Low warping | high flame retardancy

IDENTIFICATION OF THE MATERIAL

Trade name	THE K9™ PC FR
Chemical name	Polycarbonate
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	260~300°C
Bed temperature	100~120°C
Bed modification	Tape or glue
Active cooling fan	0~50%
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	≤500mm/s

Settings are based on a 0.4mm nozzle.

MATERIAL PROPERTIES

		Test Method
Melt temperature	~230°C	ISO 11357
Melt flow rate (MFR)¹	15~20g/10min	ISO 1133
Heat deflection temperature(HDT)²	111°C	ISO 75
Vicat softening temperature(VST)³	122°C	ISO 306
density	1.18~1.2g/cm ³	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1. test conditions: T= 270°C; m= 1.2kg.

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 a BambuLab X1C under the following conditions:

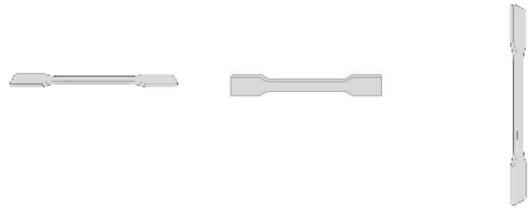
Printing temperature: 280°C

Heated bed temperature: 110°C

Print speed: 225mm/s

Shell thickness: 1.2mm

Infill under 45°

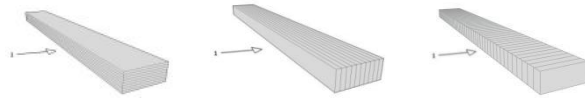


	Printed horizontal X,Y-axis	Printed horizontal X,Z-axis	Printed horizontal Z,X-axis ^{1,2}
Infill	100%	100%	100%
Tensile strength (Mpa)	55~60	60~65	25~34
Elongation at break (%)	8~13	10~14	2~6
E modulus (Mpa)	2200~2300	2200~2400	1700~1900

MECHANICAL PROPERTIES|IMPACT TEST
Test Method ISO 179

The same conditions as tensile test.

1→impact direction

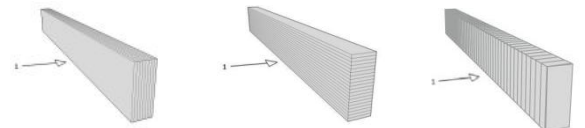


	100%	100%	100%
Infill	100%	100%	100%
Impact strength (KJ/m ²)	40~60	60~90	4~8
Notch impact strength ³ (KJ/m ²)	7~10	3~6	1~4

MECHANICAL PROPERTIES |FLEXURAL TEST
Test Method ISO 178

The same conditions as tensile test.

1→bending direction



	100%	100%	100%
Infill	100%	100%	100%
Maximum force (Mpa)	96~102	103~109	45~65
Flexural modulus (Mpa)	2500~2700	2600~2700	1900~2100

1. Z,X-axis test data are for reference only
2. the stress range of the Z,X-axis modulus: 10~20MPa
3. 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