

TECHNICAL DATA SHEET

KEXCELLED THE K10™ PC

Product code:	Revision Number:	Revision date:	TDS No.:
THE K10™ PC	03	14/01/2022	KT024

Characteristic:

Excellent heat resistance | weather resistance

IDENTIFICATION OF THE MATERIAL

Trade name	THE K10™ PC
Chemical name	Polycarbonate
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	310~350℃
Bed temperature	140~180℃
Chamber temperature	80~150℃
Bed modification	NO&High temperature glue
Active cooling fan	OFF
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	~280℃	ISO 11357
Melt flow rate (MFR)¹	30~35g/10min	ISO 1133
Heat deflection temperature(HDT)²	163℃	ISO 75
Vicat softening temperature(VST)³	176℃	ISO 306
density	1.18~1.20g/cm ³	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1. test conditions: T= 330℃; 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 INTAMSYS FUNMAT HT under the following conditions:

Printing temperature: 340°C

Heated bed temperature: 150°C

Chamber temperature: 90°C

Print speed: 50mm/s

Shell thickness: 1.2mm

Infill under 45°



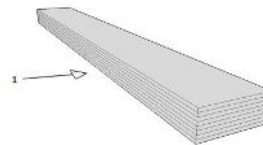
Printed horizontal X,Y-axis

Infill	100%
Tensile strength (Mpa)	65~70
Elongation at break (%)	8~12
E modulus (Mpa)	3700~4000

MECHANICAL PROPERTIES|IMPACT TEST
Test Method ISO 179

The same conditions as tensile test.

1→impact direction

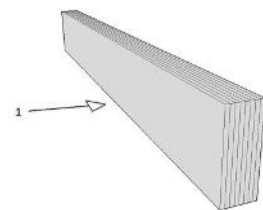


Infill	100%
Impact strength (KJ/m ²)	43~47
Notch impact strength ¹ (KJ/m ²)	3~6

MECHANICAL PROPERTIES |FLEXURAL TEST
Test Method ISO 178

The same conditions as tensile test.

1→bending direction



Infill	100%
Maximum force (Mpa)	97~105
Flexural modulus (Mpa)	2300~2600

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