

TECHNICAL DATA SHEET

KEXCELLED PC K7

Product code: PC K7	Revision Number: 01	Revision date: 24/09/2020	TDS No.: KT04.012.0146
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Characteristic:

High strength | high heat resistance

IDENTIFICATION OF THE MATERIAL

Trade name	PC K7
Chemical name	Polycarbonate
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	250~270°C
Bed temperature	80~100°C
Bed modification	NO
Active cooling fan	ON
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	~230°C	ISO 11357
Melt flow rate (MFR) ¹	30~40 g/10min	ISO 1133
Heat deflection temperature(HDT)²	107°C	ISO 75
Vicat softening temperature(VST)³	116°C	ISO 306
Density*	~1.20 g/cm ³	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1. test conditions: T= 220°C; m= 10 kg.

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 an FlashForge Guider 2s, under the following conditions:

Printing temperature: 250°C

Heated bed temperature: 100°C

Print speed: 45mm/s

Shell thickness: 0.8mm

Infill under 45°

Infill 100%

Tensile strength (Mpa) 70~75

Elongation at break (%) 4~6


MECHANICAL PROPERTIES|IMPACT TEST
Test Method ISO 179

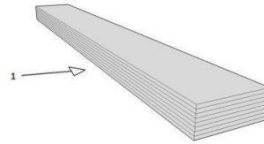
The same conditions as tensile test.

1→impact direction

Infill 100%

Impact strength (KJ/m²) 35~40

Notch impact strength¹ (KJ/m²) 4~6


MECHANICAL PROPERTIES |FLEXURAL TEST
Test Method ISO 178

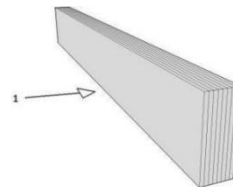
The same conditions as tensile test.

1→bending direction

Infill 100%

Maximum force (Mpa) 120~130

Flexural modulus (Mpa) 3400~3600



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
Diameter 3.00mm	3.00±0.03mm	EX1125
Max roundness deviation (1.75)	0.03mm	EX1125
Max roundness deviation (2.85)	0.03mm	EX1125
Max roundness deviation (3.00)	0.03mm	EX1125
Net weight on reel	1kg	EX1125