

TECHNICAL DATA SHEET

KEXCELLED THE K5™ PETG GF

Product code:	Revision Number:	Revision date:	TDS No.:
THE K5™ PETG GF	02	20/02/2025	KT081

Characteristic:

Printing easily and no plug|frosted finish|excellent mechanical properties|variety color scheme.

IDENTIFICATION OF THE MATERIAL

Trade name	THE K5™ PETG GF
Chemical name	Poly(ethylene terephthalate-co-1,4-cyclohexylenedimethylene terephthalate)
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	250~275°C
Bed temperature	60~80°C
Bed modification	Tape or glue
Active cooling fan	0~50%
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	≤150mm/s

Settings are based on a 0.4mm nozzle.

MATERIAL PROPERTIES

		Test Method
Glass transition temperature	~66°C	ISO 11357
Melt flow rate (MFR) ¹	5~10g/10min	ISO 1133
Heat deflection temperature(HDT) ²	76°C	ISO 75
Vicat softening temperature(VST) ³	85°C	ISO 306
density	1.25~1.28g/cm ³	ISO 1183
Odor	Low odor	/
Solubility	Insoluble in water	/

1.test conditions: T= 230 °C; m= 2.16kg.

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:

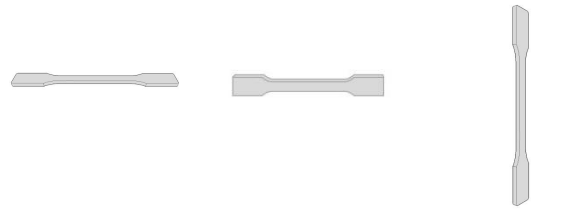
Printing temperature: 255°C

Heated bed temperature: 70°C

Print speed: 143.75mm/s

Shell thickness: 1.2mm

Infill under Concentric circles



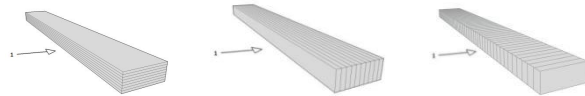
	Printed horizontal X,Y-axis	Printed horizontal X,Z-axis	Printed horizontal Z,X-axis ^{1,2}
Infill	100%	100%	100%
Tensile strength (Mpa)	45~51	48~51	25~31
Elongation at break (%)	4~8	7~10	2~7
E modulus (Mpa)	2200~2400	2300~2400	1100~1400

MECHANICAL PROPERTIES|IMPACT TEST

Test Method ISO 179

The same conditions as tensile test.

1→impact direction



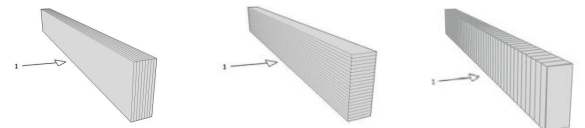
Infill	100%	100%	100%
Impact strength (KJ/m ²)	23~35	23~37	5~15
Notch impact strength ³ (KJ/m ²)	4~6	4~5	1~2

MECHANICAL PROPERTIES |FLEXURAL TEST

Test Method ISO 178

The same conditions as tensile test.

1→bending direction



Infill	100%	100%	100%
Maximum force (Mpa)	71~84	77~81	27~52
Flexural modulus (Mpa)	2200~2700	2400~2500	1400~1700

1. Z,X-axis test data are for reference only
2. the stress range of the Z,X-axis modulus: 10~17MPa
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