TECHNICAL DATA SHEET

KEXCELLED THE K5™ PETG

Product code:	Revision Number:	Revision date:	TDS No.:
THE K5™ PETG	04	20/02/2025	KT015

Characteristic:

environmentally friendly|excellent effect applied to 3D printing|good interlayer bond|no buckling deformation| excellent toughness.

IDENTFICATION OF THE MATERIAL	
Trade name	THE K5™ PETG
Chemical name	Poly(ethylene terephthalateco-1,4-cylclohexylenedimethylene terephthalate)
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS	
Nozzle temperature	235~275℃
Bed temperature	60~80℃
Bed modification	PEI frosted board
Active cooling fan	0~50%
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	≤250mm/s

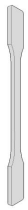
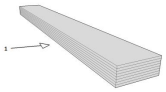
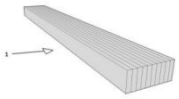
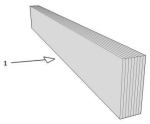
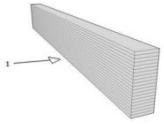
Settings are based on a 0.4mm nozzle.

MATERIAL PROPERTIES		Test Method
Glass transition temperature	~66℃	ISO 11357
Melt flow rate (MFR) [1]	10~15g/10min	ISO 1133
Heat deflection temperature(HDT) [2]	76℃	ISO 75
Vicat softening temperature(VST) [3]	82℃	ISO 306
density	1.27~1.29g/cm^3	ISO 1183
Odor	Low odor	/
Solubility	Insoluble in water	/

1.test conditions: T= 230℃; 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 a BambuLab X1C under the following conditions： Printing temperature: 255℃ Heated bed temperature：70℃ Print speed：162.5mm/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）	38~40	51~53	20~24
Elongation at break（%）	9~12	8~11	2~4
Emodulus（Mpa）	1600~1700	1800~1900	1500~1600
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）	31~34	80~109	6~9
Notch impact strength[3]（KJ/m^2）	3~5	2~4	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）	64~70	82~85	35~44
Flexural modulus（Mpa）	1700~2000	2100~2200	1400~1600

1. Z,X-axis test data are for reference only
2. the stress range of the Z,X-axis modulus：1~5MPa
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