

TECHNICAL DATA SHEET

KEXCELLED THE K5™ ASA

Product code:	Revision Number:	Revision date:	TDS No.:
THE K5™ ASA	05	20/02/2025	KT022

Characteristic:

excellent toughness|weather resistance.

IDENTIFICATION OF THE MATERIAL

Trade name	THE K5™ ASA
Chemical name	Acrylonitrile-Styrene-Acrylate Copolymer
Use	3D Printing
Origin	KEXCELLED

GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	250~290℃
Bed temperature	80~100℃
Bed modification	PEI frosted board
Active cooling fan	0%~50%
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	≤170mm/s

Settings are based on a 0.4mm nozzle.

MATERIAL PROPERTIES

		Test Method
Melt temperature	~190℃	ISO 11357
Melt flow rate (MFR) ¹	25~40g/10min	ISO 1133
Heat deflection temperature(HDT) ²	94℃	ISO 75
Vicat softening temperature(VST) ³	108℃	ISO 306
density	1.06~1.08g/cm ³	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1.test conditions: T= 220℃; m= 10kg.

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:

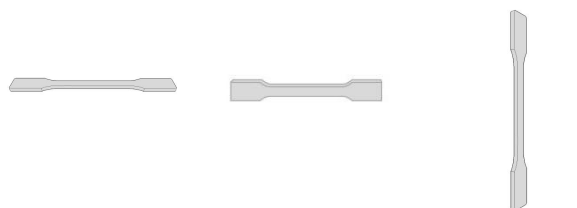
Printing temperature: 270°C

Heated bed temperature: 90°C

Print speed: 225mm/s

Shell thickness: 1.2mm

Infill under 45°

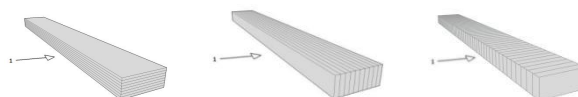


	Printed horizontal X,Y-axis	Printed horizontal X,Z-axis	Printed horizontal Z,X-axis ^{1,2}
Infill	100%	100%	100%
Tensile strength (Mpa)	33~36	37~41	9~12
Elongation at break (%)	5~9	8~11	1~3
E modulus (Mpa)	1600~1800	1800~2100	1200~1400

MECHANICAL PROPERTIES|IMPACT TEST
Test Method ISO 179

The same conditions as tensile test.

1→impact direction

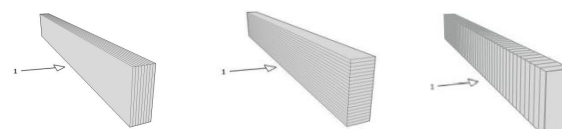


Infill	100%	100%	100%
Impact strength (KJ/m ²)	13~26	29~32	3~4
Notch impact strength ³ (KJ/m ²)	6~10	4~7	1~2

MECHANICAL PROPERTIES |FLEXURAL TEST
Test Method ISO 178

The same conditions as tensile test.

1→bending direction



Infill	100%	100%	100%
Maximum force (Mpa)	55~61	68~71	17~21
Flexural modulus (Mpa)	1800~2000	2300~2400	1100~1300

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
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