

## TECHNICAL DATA SHEET

### KEXCELLED PEKK K10IAM

Product code:	Revision Number:	Revision date:	TDS No.:
PEKK K10IAM	01	24/01/2022	KT057

#### Characteristic:

Excellent heat resistance | high strength | chemical resistance | flame resistance |  
Excellent interlayer bond

#### IDENTIFICATION OF THE MATERIAL

Trade name	PEKK K10IAM
Chemical name	Polyetherketoneketone
Use	3D Printing
Origin	KEXCELLED

#### GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	360~390°C
Bed temperature	120~170°C
Chamber temperature	90~160°C
Bed modification	NO
Active cooling fan	0~100%
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	~340°C	ISO 11357
Melt flow rate (MFR) <sup>1</sup>	6~8 g/10min	ISO 1133
Heat deflection temperature(HDT) <sup>2</sup>	150°C (amorphous state)	ISO 75
Vicat softening temperature(VST) <sup>3</sup>	157.8	ISO 306
density	1.28g/cm <sup>3</sup>	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1. test conditions: T= 380°C; m= 1kg.

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 INTAMSYS FUNMAT HT under the following conditions:

Printing temperature: 400°C

Heated bed temperature: 100°C

Chamber temperature: 50°C

Print speed: 50mm/s

Shell thickness: 1.2mm

Infill under 45°



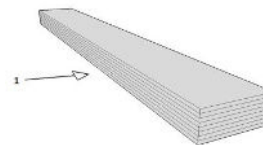
Printed horizontal X,Y-axis

Infill	100%
Tensile strength (Mpa)	80~100
Elongation at break (%)	4~6
E modulus (Mpa)	4200~4500

**MECHANICAL PROPERTIES|IMPACT TEST** **Test Method ISO 179**

The same conditions as tensile test.

1→impact direction

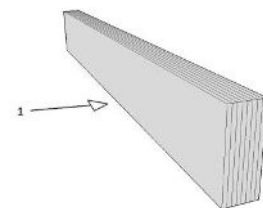


Infill	100%
Impact strength (KJ/m <sup>2</sup> )	50~60
Notch impact strength <sup>1</sup> (KJ/m <sup>2</sup> )	4~8

**MECHANICAL PROPERTIES |FLEXURAL TEST** **Test Method ISO 178**

The same conditions as tensile test.

1→bending direction



Infill	100%
Maximum force (Mpa)	140~170
Flexural modulus (Mpa)	2900~3300

1. notch type: type A

<b>FILAMENT SPECIFICATION</b>		<b>Test Method</b>
Diameter 1.75mm	1.75±0.03mm	EX1125
Max roundness deviation (1.75)	0.03mm	EX1125
Net weight on reel	1kg	EX1125