MELOVY

www.melovy3d.com

TECHNICAL DATA SHEET

PEEK

BRIEF INTRODUCTION

PEEK as a representative material of special plastics, it has excellent mechanical property, heat resistance, self-extinguishing, corrosion resistance of most chemical reagents and solvents, radiation resistance, also has good bio-compatibility. Combined with those excellent properties, an ideal filament for printing precision electronic parts, parts that require special high temperature and flame resistance, as well as some medical devices

CHARACTERISTIC

Excellent heat resistance|High strength|Chemical resistance|Excellent toughness|Flame resistance|Biocompatibility

IDENTFICATION OF THE MATERIAL

Trade name	PEEK
Chemical name	Polyetheretherketone
Application	3D PRINTING

GUIDELINE FOR PRINT SETTINGS

Nozzle temperature	425±25℃
Bed temperature	100~160℃
Chamber temperature	80~140℃
Bed modification	NO
Active cooling fan	OFF
Layer height	0.2mm
Shell thickness	≥0.8mm
Print speed	20~50mm/s

Settings are based on a 0.4mm nozzle.

MATERIAL PROPERTIES		Test Method
Melt temperature	~340℃	ISO 11357
Melt flow rate (MFR) [1]	14~18 g/10min	ISO 1133
Heat deflection temperature(HDT)[2]	150 ℃(amorphous state) 170 ℃(crystalline state)	ISO 75
Vicat softening temperature(VST)[3]	/	ISO 306
Density	1.28 g/cm^3	ISO 1183
Odor	Odorless	/
Solubility	Insoluble in water	/

1. Test conditions: T= 380℃; m= 5 kg.
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 an INTAMSYS FUNMAT HT，

under the following conditions：

Printing temperature: 420℃

Heated bed temperature：100℃

Chamber temperature: 80℃

Print speed：30 mm/s

Shell thickness：0.8mm

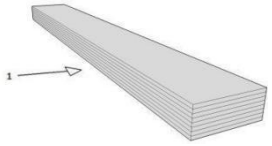
Infill under 45。

Infill	100%
Tensile strength（Mpa）	70~80
Elongation at break（%）	4~6

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

The same conditions as tensile test.

1→Impact direction

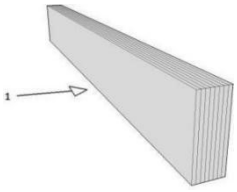


Infill	100%
Impact strength（KJ/m^2）	60~70
Notch impact strength[1]（KJ/m^2）	14~18

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

The same conditions as tensile test.

1→Bending direction



Infill	100%
Maximum force（Mpa）	110~120
Flexural modulus（Mpa）	2400~2600

1. 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

Suzhou Melovy Technology CO., Ltd

NO.68, Nantiancheng Road, Xiangcheng Dist.

Suzhou City, Jiangsu Prov. China

Tel: +86-0-512-6580-8834

Email:info@melovy3d.com

Website: www.melovy3d.com