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TECHNICAL DATA SHEET

TPU 95A

BRIEF INTRODUCTION

TPU95A is a TPU flexible material which is easy to print. With the same hardness, our TPU95A can be extruded more easily than other conventional TPU consumables. With the right extruder, the printing speed can be more than 100mm/s.

CHARACTERISTIC

We improve the fluidity of TPU material, so that the material can be easily pushed in the extruder with only a small thrust. High-speed printing (≥ 100mm/s) can be easily realized in the process extruder, and conventional printing (30-60mm/s) can be realized in the remote extruder.

IDENTFICATION OF THE MATERIAL	
Trade name	TPU 95A
Chemical name	Thermoplastic polyurethanes
Application	3D PRINTING

GUIDELINE FOR PRINT SETTINGS	
Nozzle temperature	205-225℃
Bed temperature	20~50℃
Bed material	Glass,PEI or PC film
Active cooling fan	ON/100%
Recommend nozzle size	≥ 0.2mm
Raft distance	0.18-0.22mm
Print speed	30-100mm/s

Settings are based on a 0.4mm nozzle.Nozzle temp.210℃,Bed temp.:50℃， Printing speed:60mm/s,filling rate:100%,filling angle:+/-45°

MATERIAL PROPERTIES		Test Method
Melt index	1.15g/cm³	200℃，2.16kg
Vicat softening temperature	99℃	ISO 306
Density	1.15g/cm^3	ISO 1183
Hardness	95A	ISO7619
Tensile breaking strength(X-Y)	31.81+/-3.26 MPa	ISO527
Elongation at break 100%（X-Y）	471+/-81%	ISO527
100% stress at definite elongation （X-Y)	9.75+/-0.16Mpa	ISO527
200% stress at definite elongation （X-Y)	12.2+/-0.27Mpa	ISO527
300% stress at definite elongation （X-Y)	17.0+/-0.49Mpa	ISO527
Odor	Odorless	/
Solubility	Insoluble in water	/

Other Suggestions:

1. If you want to achieve high-speed printing, it is recommended to use a process extruder, such as BMG extruder, Titan extruder, Hemera extruder, and appropriately raise the nozzle temperature.

2. TPU material is easy to absorb moisture when exposed to air. After hygroscopic printing, there will be filament drawing, extrusion bubbles, rough printing surface and other phenomena, reducing the printing quality. It is recommended that you put the filament into the drying box (humidity controlled below 15%) immediately after opening the package for printing. Unused filaments should be put back into original packaging bags and sealed for storage.

3. After the material is damp, there will be an increase in printing filament drawing, extrusion bubbles, and rough printing surface quality. Please dry the filament in the oven at 70-80℃ for 4-6h to restore the printing quality.

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