TECHNICAL DATA SHEET

Odorless ABS-GF

10% glass fiber reinforced low odor ABS

BRIEF INTRODUCTION

Odorless ABS-GF combines standard ABS material box with short cut glass fibre. The result is the retention of low odor characteristics while having better resistance to warping box material rigidity. Compared with the standard ABS, the bending strength is increased by 12% and the bending modulus is increased by 23%.

Since glass fiber will accelerate the wear of the nozzle from consumables, it is recommended that you use steel or a nozzle with higher hardness.

CHARACTERISTIC

Matte surface | High flow, Good Formability, low odor | The characteristics of high rigidity and low density are also suitable for some applications such as model aircraft

IDENTFICATION OF THE MATERIAL

Trade name	**ABS-GF**
Chemical name	Glass fiber ABS
Application	3D PRINTING

GUIDELINE FOR PRINTING SETTINGS

Nozzle temperature	250-270℃
Bed temperature	100~110℃
Bed material	PEI or Coating with PVP glue
Active cooling fan	OFF
Recommend nozzle size	0.4-1.0mm
Raft distance	0.18-0.22mm
Print speed	30-90mm/s
Retraction distance	2-5 mm
Retraction speed	1800-3600 mm/min

Settings are based on a 0.4mm nozzle.Nozzle temp.250 ℃ ,Bed temp.:110 ℃ ， Printing speed:50mm/s,filling rate:100%,filling angle:+/-45°

MATERIAL PROPERTIES	Test Method	Typical value
Density	ISO 1183	1.1 g/cm³
Water absorption	ISO 62: Method 1	/ %
Melting Temperature	ISO 11357	101℃

Melt index	250℃, 2.16kg	4 g/10min
Determination of temperature	ISO 75: Method A	92℃ (1.80MPa)
	ISO 75: Method B	96℃ (0.45MPa)
Tensile strength(X-Y)		39.2±0.93 MPa
Young's modulus(X-Y)	ISO 527	2826±56 MPa
Elongation at break (X-Y)		2.43±0.20 %
Bending strength (X-Y)	ISO 178	66.21±0.42 MPa
Bending modulus (X-Y)		2681±25 MPa
Charpy impact strength (X-Y)	ISO 179	8.17±0.66 KJ/㎡
Tensile strength (Z)		19.2±0.9 MPa
Young's modulus (Z)	ISO 527	2331±130 MPa
Elongation at break (Z)		1.28±0.32 %

Other suggestions:

1. Compared with PLA,PETG and other materials, ABS materials need a higher ambient temperature during the printing process to help release the residual stress in the forming process of parts. Please keep the printer sealed during the printing process to effectively avoid warping and cracking of printed parts. If the device has the heating chamber function, you are advised to set the heating chamber temperature between 60 ° C and 80 ° C.
2. For ABS-GF filament after long-term unpacking, if the printing quality is found to decrease during the printing process, please dry the filament at 70-80℃ for 4h.
3. Although ABS-GF has less odor than its counterparts, it is still recommended to place the printer in a ventilated environment when printing.
4. The glass fiber inside the consumables will cause wear to the nozzle, so it is recommended to use the tempered nozzle and nozzle with higher hardness.

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