



FusRock® FDM Printing Material Technical Data Sheet

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FusFun™ ASA-GF

10%短切玻纤增强 ASA 3D 打印材料

10% chopped glass fiber reinforced ASA 3D Printing Material

产品亮点

Product Advantages

FusFun™ ASA-GF 是一款专门为 3D 打印开发的 ASA 类耗材，同时加入了 10%质量分数的玻璃纤维进行增强，与同类产品相比具有更好的打印稳定性。

FusFun™ ASA-GF is an ASA-based filament specially developed for 3D printing and it is reinforced with 10% glass fiber. Compared with other ASA filaments, it has a better 3D printing stability.

产品介绍

Product Description

FusFun™ ASA-GF 是一款高强度的 ASA 类 3D 打印耗材，具有突出的机械性能，其 3D 打印的制件在 XY 轴方向拉伸强度可接近 45MPa。短切玻璃纤维的加入，使其抗翘曲能力和尺寸稳定性得以提升，并且 ASA 材料具有优秀的抗紫外线老化能力，这使其成为大尺寸零件打印和户外应用的理想选择。

FusFun™ ASA-GF 可以与 FusFree™ S-Multi Quick-Remove Support Material 快速易剥离支撑材料配合使用，解决复杂模型支撑面成型效果差的难题。

FusFun™ ASA-GF is a high-strength ASA-based 3D printing filament with outstanding mechanical properties. Due to the addition of chopped glass fibers, the tensile strength of its 3D printed parts in the XY axis direction can be close to 45MPa. Due to the addition of chopped cut glass fiber, its warping resistance and dimensional stability are significantly improved, and ASA material has excellent anti-UV aging properties, these make it ideal for printing large-size models and outdoor applications.

FusFun™ ASA-GF can be used together with FusFree™ S-Multi Quick-Remove Support Material to solve the poor surface of complex model above supports.

产品详情

Available



颜色 Color: 黑色 Black/ 红色 Red/ 黄色 Yellow/ 橙色 Orange/ 蓝色 Blue/ 灰色 Grey/ 绿色 Green/
军绿色 Army Green/ 紫色 Purple

线径 Diameter: 1.75mm

净重 Net Wet: 1KG, 2.5KG, 3KG

物性表

Material Properties

测试项目 Property	测试方法 Testing method	典型值 Typical value
密度 Density	ISO 1183	1.10g/cm ³
玻璃化转变温度 Glass transition temperature	ISO 11357	106°C
熔融指数 Melt index	250°C, 2.16kg	4 g/10min
维卡软温度 Vicat softening temperature	ISO 306	105 °C
热变形温度 Determination of temperature	ISO 75: Method A ISO 75: Method B	92°C (1.8MPa) 97°C (0.45MPa)
拉伸断裂强度 (X-Y) Tensile breaking strength	ISO 527	45.78±1.08 MPa
断裂伸长率 (X-Y) Elongation at break		3.05±0.18 %
杨氏模量 (X-Y) Young's Modulus		2871.68±96.09 MPa
拉伸断裂强度 (Z) Tensile breaking strength	ISO 527	30.86±1.74 MPa
杨氏模量 (Z) Young's Modulus		2352.06±107.69 MPa
断裂伸长率 (Z) Elongation at break		1.76±0.25 %



弯曲强度 (X-Y) Bending strength	ISO 178	79.59±1.74 MPa
弯曲模量 (X-Y) Bending Modulus		2751.21±34.44 MPa
缺口冲击强度 (X-Y) Charpy impact strength	ISO 179	7.08±0.83 kJ/m ²

试样打印参数：喷嘴大小 0.4mm，喷嘴温度 250°C，底板加热 100°C，打印速度 50mm/s，填充率 100%，填充角度±45°

Specimens printed under the following conditions: Nozzle size 0.4mm, Nozzle temp 250°C, Bed temp 100°C, Print speed 50mm/s, Infill 100%, Infill

angle ±45°



建议打印参数

Recommended printing conditions

喷头温度 Nozzle temperature	250-270°C
建议喷嘴大小 Recommended nozzle diameter	≥0.4 mm
建议底板材质 Recommended build surface	玻璃、PEI 膜或 PC 膜 Glass、PEI Film or PC Film
底板温度 Build plate temperature	100-110°C
Raft 间距 Raft separation distance	0.18mm
冷却风扇 Cooling fan speed	0-20%
打印速度 Print speed	30-250 mm/s
回抽距离 Retraction distance	1-5 mm
回抽速度 Retraction speed	1800-3600 mm/min
建议支撑材料 Recommended Support Material	FusFree™ S-Muti Quick-Remove Support

其他建议：

1. ASA 类材料相比 PLA, PETG 等材料在打印过程中需要有较高的环境温度来帮助释放零件成型过程中的残余应力，在打印过程中请将打印机保持封闭状态，可以有效避免打印零件出现翘曲和开裂现象。如果设备具有加热腔功能，建议将加热腔温度设置在 60-80°C 之间。
2. 长期打开包装后的 ASA-GF 线材，如打印过程中发现打印质量下降，请将线材置于 70-80°C 条件下干燥 4-6h。

Additional Suggestions:

1. Compared with PLA, PETG and other materials, ASA materials need a higher chamber temperature to help release the residual stress during the printing process. Please keep the printer chamber closed during the printing process. It can effectively avoid printed parts from warping and cracking. If the device



has a heated chamber, it is recommended to set the temperature of heated chamber between 60-80°C.

2. If the ASA-GF filament has been unpacked for a long time and the printing quality starts to degrade during the printing process, please dry the filament at 70-80°C for 4-6 hours before printing.