



MINGDA

Technical Data Sheet

WELCOME

Company Introduction

About us

Shenzhen MINGDA Technology Co., Ltd. was founded in 2012, which is a professional 3D printer research and development manufacturer in China and a national high-tech enterprise.

The Company's business focuses on the development, production and sales of high performance extruded 3D printing materials. With formulation development as its core competence, the Company is committed to solving the Fused Deposition Modeling process from the material side, reducing the hardware requirements of materials for printing equipment, and achieving the goal of printing high-performance composite materials with low-cost printers.

The Company is committed to providing customers with industry-leading 3D printing materials and total solutions from printing process to printing equipment, and has the ability to quickly customize materials to meet customer application requirements.

Superiority

- With a deep understanding of the FDM process, all product lines and materials are optimized for the FDM process.
- Relying on the strong strength in material modification development, we can provide customized material development services according to customer application requirements.
- The unique product line of support materials fits perfectly with high-performance printing materials to form a complete industrial-grade printing solution, thus closing the loop of the printing process.
- High-performance online production monitoring equipment and mature production processes can ensure the stable quality of FDM materials.

Contact us

For any inquiries or technical support, please contact:support@3dmingda.com



ASA

15% chopped glass fiber reinforced Polyethylene Terephthalate 3D printing material.

Product Description

MINGDA ASA has excellent all-round properties , featuring minimal odor and UV resistance . It's an alternative to ABS filaments due to its similar physical and mechanical properties with ABS. MINGDA ASA is not sensitive to moisture . Once the sealed packaging is open , there is no need for moisture-proof measures.

MINGDA Support F-Blue Quick-remove Support Material is a good support material for MINGDA ASA , and it solves the question of poor support surface quality when MINGDA ASA works as a self-support material



Product Advantages

- **Low Odor**

MINGDA ASA gives out minimal odor compared with other traditional ABS filaments during printing . It is more suitable for 3D printing hobbyists

- **UV Resistance**

MINGDA ASA can resist material degradation , aging and color fading which are caused by good choice for outdoor application with its excellent aging resistance and weather resistance. Its aging resistance can be 10 times higher than that of traditional ABS filaments

Available

| | |
|------------|-------------------|
| Colors | Natural/Black/Red |
| Diameter | 1.75mm/2.85mm |
| Net weight | 1kg |

Material Properties

| Property | Testing method | Typical value |
|---------------------------------|------------------|-------------------------------|
| Density | ISO 1183 | 1.1 g/cm ³ |
| Glass transition temperature | ISO 11357 | 98°C |
| Melt index | 220°C, 2.16kg | 5.6 g/10min |
| Vicat softening temperature | ISO 306 | 105°C |
| Determination of temperature | ISO 75: Method B | 90°C(18MPa) 96°C (0.45MPa) |
| Tensile yield strength (X-Y) | | 38.5±1.6MPa |
| Yield elongation (X-Y) | | 2.38±0.23% |
| Young's modulus (X-Y) | ISO 527 | 2317±246MPa |
| Tensile breaking strength (X-Y) | | 32.23±1.13MPa |
| Elongation at break (X-Y) | | 5.2±1.4% |
| Tensile yield strength (Z) | | 27.87±0.4MPa |
| Young's modulus (Z) | ISO 527 | 2037±64MPa |
| Elongation at break (Z) | | 2.43±0.27% |
| Bending strength (X-Y) | | 64.49±1.3MPa |
| Bending modulus (X-Y) | ISO 178 | 2399±147MPa |
| Charpy impact strength (X-Y) | ISO 179 | 12.9±0.9KJ/m ² |

Specimens printed under the following conditions : Nozzle size 0.4mm , Nozzle temp 250°C, Bed temp 105°C. Print speed 50mm/s Infill 100%, Infill angle±45°

Recommended printing conditions

| | |
|----------------------------------|---|
| Nozzle temperature | 240-270°C |
| Recommended nozzle diameter | ≥0.2mm |
| Recommended build plate material | Class, PEI Film or PC Film |
| Build plate temperature | 90-110°C |
| Raft separation distance | 0.18-0.2mm |
| Cooling fan speed | Off |
| Print speed | 20-90 mm/s |
| Retraction distance | 2-5 mm |
| Retraction speed | 1800-3600 mm/min |
| Recommended support material | Support F-Green Quick-Remove Support Material |

Additional Suggestions:

1. Compared with PLA and PETG filaments, ASA / ABS needs a higher environment temperature to release the residual stress during printing. Please keep the chamber closed to avoid warping and layer separation issues during the process. If your printer has a heated enclosure already, please keep the chamber temperature between 60-80°C.

2. If you find the printing quality decreases after ASA has been exposed in the air for a long time, please dry the filament at 70-80 °C for 4-6h.



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