

Technical Data Sheet

ABS Matte Filament

ABS Matte is an FFF 3D printing filament, which is produced using KUMHO ABS GN203. It offers high toughness and impact resistance, along with a certain degree of heat resistance. Prints produced with ABS Matte have a distinct matte surface finish. It is broadly compatible with a wide range of FFF 3D printers.

Features:

Easy to print/High toughness/High impact resistance/Matte finish.

Properties:

Physical Properties	Test Method	Units	Typical Value
Density	ISO 1183	g/cm³	1.04~1.06
Melt Index (MFR) (220°C/5Kg)	ISO 1133	g/10min	5~10
Water Absorption (23°C/24h)	ISO 62	%	1
Mechanical Properties			
Tensile Strength (X-Y)	ISO 527	Mpa	35.5~36.5
Elongation at Break (X-Y)	ISO 527	%	5~6.5
Bending Modulus (X-Y)	ISO 178	Mpa	2070~2133
Bending Modulus (X-Z)			1335~1487
Bending Strength (X-Y)	ISO 178	Mpa	73.5~74.5
Bending Strength (X-Z)			19.8~24.8
Izod Impact Strength (X-Y)	ISO 180	KJ/m²	25.5~29.8
Izod Impact Strength (X-Z)			2.3~2.7
Thermal Properties			
HDT@ 0.455 MPa (66 psi)	ISO 75	°C	88

Testing Specimen Printing Conditions:

Test Equipment	Flashforge Guider 3 Ultra
Nozzle Diameter	0.4mm
Nozzle Temperature	250 °C
Printing Speed	250mm/s
Wall Thickness	1.2mm
Infill	100%
Standard Testing Specimen	Specific dimensions are shown in Attachment 1.

Recommended Printing Conditions:

Parameter	
Nozzle Temperature	230~270 °C (250 °C recommended)
Build Platform Temperature	80~110 °C (100 °C recommended)
Build Surface Material	Tempered glass, BuildTak, Carbon fiber board
Nozzle Diameter	φ0.4/0.6mm (φ0.4mm recommended)
Cooling Fan	0~50%
Layer Thickness	0.12~0.3mm
Printing Speed	40~250mm/s (60mm/s recommended)
Travel Speed	60~350mm/s
Ambient Temperature for Printing	Room temperature~40 °C
Retraction Length	0.3~2mm
Retraction Speed	30~50mm/s
Recommended Support Material	Self-supporting, HIPS



Cautions:

In order to prevent moisture absorption and contamination, supplied packaging should be kept closed and undamaged. For the same reason, partially used filaments should be re-sealed before storage.

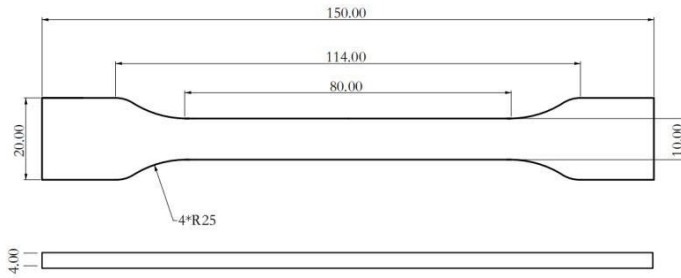
ABS Matte is a polymer material. Exposure to moisture, oxygen in the air, and UV light will accelerate its aging. In order not to affect the final printing quality, the ABS Matte filament after its package being opened should be used up as soon as possible.

ABS Matte filament is prone to moisture absorption. In case the filament has become wet, we recommend drying it in a hot air oven at 80°C for at least 5 hours to ensure the print success rate and quality.

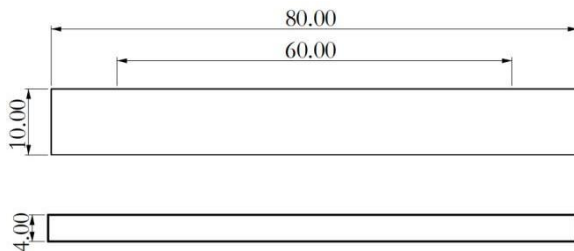
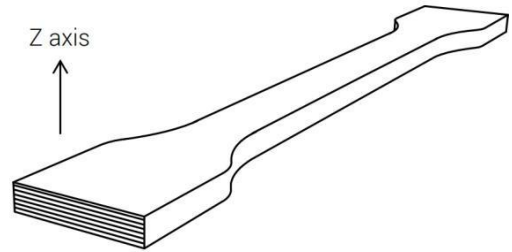
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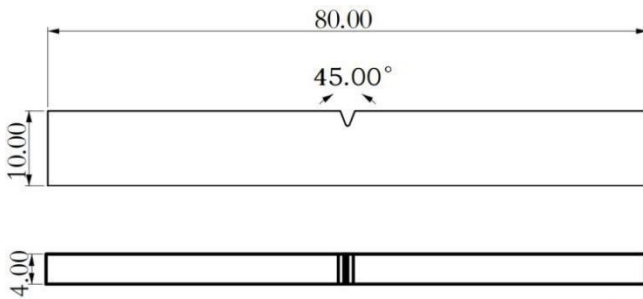
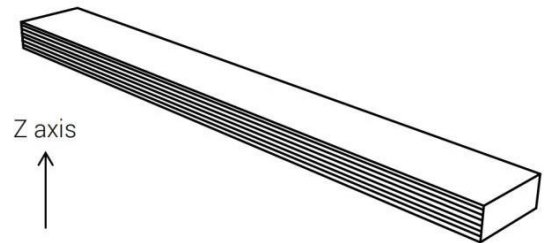
Attachment 1: Testing Specimen Size and Printing Direction



Tensile testing specimen; ASTM D638 (ISO 527, GB/T 1040)



Flexural testing specimen; ASTM D790 (ISO 178, GB/T 9341)



Impact testing specimen; ASTM D256 (ISO 179, GB/T 1043)

