MINGDA FDM Printing Material

Technical Data Sheet

MINGDA PETG-ESD

MINGDA PETG-ESD is an anti-static 3D printing consumable with good printability and balanced mechanical properties.

Material Properties

Property	Testing method	Typical value
Density	ISO 1183	1.24 g/cm³
Glass transition temperature	ISO 11357	78℃
Melt index	230℃，5kg	3.6 g/10min
Determination of temperature	ISO 75：Method A ISO 75：Method B	68℃ (1.8MPa) 70℃ (0.45MPa)
Surface resistivity	ANSI ESD S11.11	10^6Ω（per square）
Solume resistivity	ANSI ESD STM11.12	10^6Ω·m
Young's Modulus(X-Y)	ISO 527	1550±118MPa
Tensile strength(X-Y)		30±0.8 MPa
Elongation at break(X-Y)		5.1±0.2%
Young's Modulus(Z)	ISO 527	1950±208MPa

Tensile strength(Z)		26.9±1.8MPa
Elongation at break(Z)		1.91±0.3%
Bending strength(X-Y)	ISO 178	55.8±1.8MPa
Bending Modulus(X-Y)		1890±189 MPa
Charpy impact strength (X-Y)	ISO 179	8.5±0.9KJ/㎡

Specimens printed under the following conditions: Nozzle size 0.4mm，Nozzle temp 260°C, Bed temp 80°C, Print speed 50mm/s, Infill 100%, Infill angle ±45°

Recommended printing conditions

Nozzle temperature	250-280°C
Recommended nozzle diameter	0.2-1.0mm
Recommended build surface	Glass、PEI Film or Coating with PVP glue
Build plate temperature	70-80°C
Raft separation distance	0.18-0.25mm
Cooling fan speed	≤50%
Print speed	30-60 mm/s
Retraction distance	2-5 mm
Retraction speed	1800-3600 mm/min
Recommended support material	FusFree™ PVA

Additional Suggestions：

1. The surface resistivity of PETG-ESD parts is largely affected by the printing quality. When the surface resistivity is too high, it is recommended to increase the printing temperature or increase the extrusion rate.