ESD PETG consumablesChemical technical specifications

ESD PETG is a kind of FFF 3D printing filament, which is modified with a kind of PETG and carbon nanotubes.Material production. ESDLike PETG, PETG has good dimensional stability, low warpage, no cracking, and good antistatic properties. The surface resistivity of the printed model can reach 10^6~10^9 Ω, which is suitable for applications that require electrostatic discharge protection. (ESD) fields, such as the production of electronic equipment casings and fixtures, are ideal consumables used in automobiles, aerospace, semiconductor industry and electronic and electrical industries.

Main features:

Antistatic/easy to print/dimensionally stable

The main parameters:

physical properties	Test Methods	unit	Typical value
density	ISO 1183	g/cm3	1.27~1.28
Melt IndexMFR(220℃/2.16Kg)	ISO 1133	g/10min	8~12
Water absorption (23℃/24h)	ISO 62	%	<0.2
Mechanical behavior			
Tensile Strength(XY)	ISO 527	MPa	35~40
Elongation at break(XY)	ISO 527	%	5~8
Elastic Modulus(XY)	ISO 527	MPa	1400~1500
Bending strength(XY)	ISO178	MPa	64~66
Notched impact strength(XY)	ISO180	KJ/m^2	5~6
Thermodynamic properties			
HDT@ 0.455 MPa(66 psi)	ISO75	℃	65

Continuous use temperature	IEC 60216	℃	60

Test sample printing conditions:

Test Equipment	Guider IIS (Flashforge Technology)
Nozzle diameter	0.4mm
Nozzle temperature	230°C
printing speed	50mm/s
wall thickness	1.2mm
filling	100%
standard spline	The specific dimensions are as shown in Appendix 1

Recommended printing parameters:

parameter	
Nozzle temperature	220~240℃(recommended240℃)
Printing platform temperature	Room temperature ~70℃ (recommended60℃)
Printing platform material	Tempered glass, BuildTak, carbon fiber panels
Nozzle diameter	Φ0.4
model cooling fan	0~20%
layer thickness	0.12~0.3mm
printing speed	40~60mm/s (recommended50mm/s)
Idling speed	60~120mm/s
Printing environment temperature	room temperature~40℃
Withdrawal length	1~2mm
Withdrawal speed	30~50mm/s
support material	self-supporting

Precautions:

To prevent moisture absorption and contamination, the packaging

of consumables should be kept closed and intact before use. outFor the same reason, partially used supplies should be resealed before storage.

ESD PETG filaments easily absorb moisture, so it is recommended to dry them before use. Place consumables in

Dry in a hot air oven at 70°C for at least 5 hours to ensure the success rate and quality of printed models.

Disclaimer:

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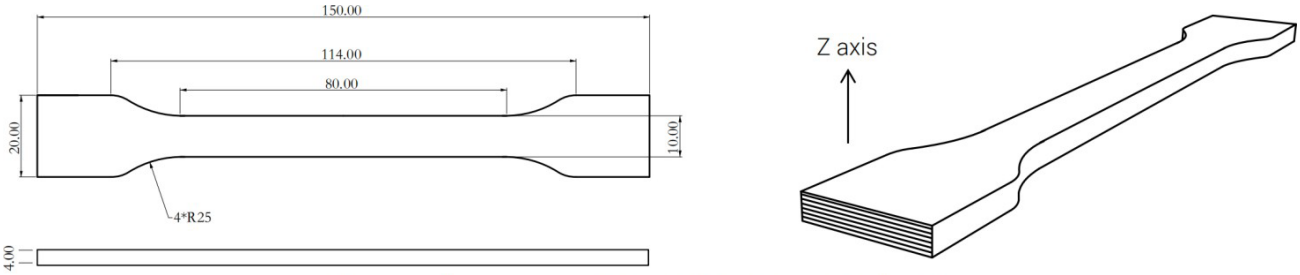
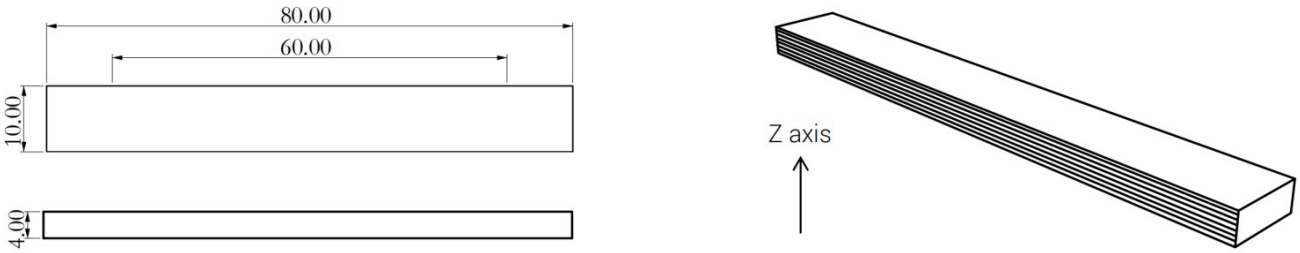
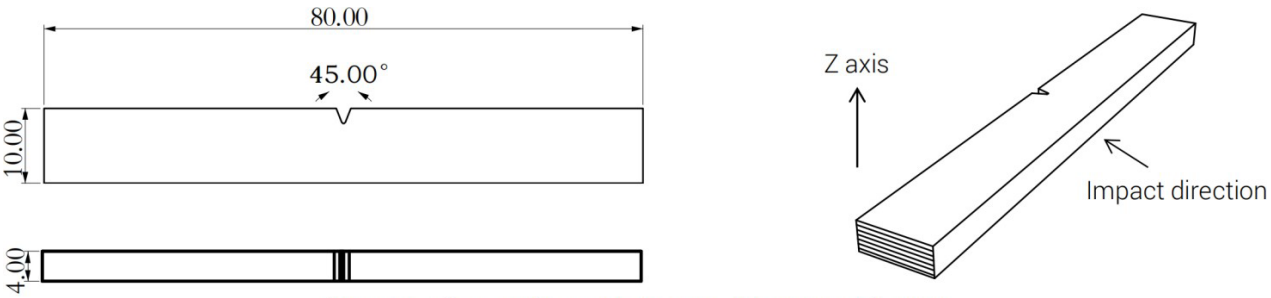
Appendix 1: Test sample size and printing direction



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



Flexural testing specimen; ASTMD790 (ISO 178, GB/T 9341)



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