

3DXTECH

<http://www.3dxtech.com/3dxstat-esd-petg-3d-printing-filament/>

3DXNano ESD (ElectroStaticDischarge) PETG

Manufacturers Recommended Settings		Personal preferred Settings
Nozzle temperature	230 - 260 °C	245°C
Bed Temperature	60-70 °C	70°C
Speed (mm/s)	?mm/s	40 mm/s
Cooling Fan Speed	?%	40 %
Max Flow Rate	mm ³ /s at °C	4 mm ³ /s at 245 °C
Retraction	4.5mm @ 25mm/s	6mm @30mm/s
Other specifications		
Density	1.21 g/cm ³	
Diameter & Tolerance	2.85 mm	2.73 – 2.82mm
Shore Hardness (A)		Glass Transition Temp ?? °C
Bed Adhesive	PVA Glue or Hairspray	Hair spray or Glue

1cm³ test piece, 10.05 x 9.91 x 9.86 (mm) (XYZ), weight 1.19g. Density = 1.21g/cm³

A Black PETG filament that is designed for use where Electrostatic Discharge protection is required.

Temperature: Prints fairly well across the majority of the range although it began to lose layer bonding below around 230°C, Stringing was noticeable at all temperatures so increased retraction will help but approximately 245°C gave marginal better bridging appearance.

Speed: 40mm/s is ideal but will print at slightly quicker speeds, but could lose bonding between layers.

Volumetric Flow: 4mm³/s at 245°C.

Preferred settings: 0.4mm Nozzle, 245°C, 40mm/s with 70°C bed temperature, and increased retraction.

Ultimaker Robot: Produces a well-defined print with good definition to the ear-cups and antenna, as well as overhangs and bridging.

Tree Frog: Produces a nice print good definition all round, the increased retraction settings produced a nice finish to the legs and belly as well as a nice finish to the head features.

3DBenchy: Increasing the retractions part way through worked well in reducing the stringing, it's difficult to see in the phot but a nice clean print other than the initial stringing before altering settings.

Conclusion: In general this was a nice filament to print with, it gives a nice satin black finish and with about 40mm/s print speed produced nice detailed features, I have not been able to check the ESD side of the materials specification. A couple of words of warning the manufacturer recommends NOT going about 270°C and post printing this required a lot of cleaning of the nozzle after use, normally only needing only 3-4 atomic pulls when swapping materials I needed 12 pull cycles to get it all out and I still wasn't 100% certain I had got it all out.

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