



## **3DXNANO™ ESD** ABS + Carbon Nanotube Filament

**Product Description:** 3DXNano™ ESD ABS (acrylonitrile butadiene styrene) is a specialty 3D printing filament that utilizes multi-wall carbon nanotubes dispersed in ABS resin. This filament is used in critical applications that require consistent electrostatic discharge (ESD) protection and a high level of cleanliness. Suitable for use in consumer FDM/FFF type printers that have heated build platforms. Made in the USA.

### Typical Properties

Property	Standard	Unit	3DXTech	Base Resin
			3DXNano™ ESD ABS	Unfilled ABS (CM 757)
Tensile Strength (Yield)	ASTM D638	MPa	42	41
Tensile Modulus	ASTM D638	MPa	2131	1948
Tensile Elongation	ASTM D638	%	3.75	4.03
Flexural Strength	ASTM D790	MPa	80	67
Flexural Modulus	ASTM D790	MPa	2174	1983
Izod Impact, Notch	ASTM D256	ft-lb/in	0.69	3.63
Izod Impact, No-Notch	ASTM D256	ft-lb/in	4.53	8.33
HDT (@66psi)	ASTM D648	°C	102.5	95.9
Surface Resistance	ASTM D257	Ohms	$10^7 - 10^9$	$>10^{13}$

### Test Specimen Print Settings

- ASTM Test Specimen
- Consumer Desktop 3D Printer (FDM/FFF type), 0.4mm nozzle
- 100% infill, 2 shells, 0.2mm layer height
- Extrusion temp: 230°C, Bed Temp: 110°C
- Extrusion speed: 90mm/s
- All data in table reported from printed test specimen

### Printing Recommendations

- Extruder Temperature: 220-240°C
- Bed / Platform Temperature: 100-110°C
- Bed Prep: 3DXTech Polyimide Tape
- Storage: Mylar Pouch (provided)

[www.3DXTech.com](http://www.3DXTech.com)

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