



CarbonX™ Carbon Fiber Nylon 12 (PA12) 3D Filament

Physical Properties	Standard	Unit	Typical Value
Density	ISO 1183	g/cc	1.16

Mechanical Properties	Standard	Unit	Typical Value
Tensile Strength, Break	ISO 527	MPa	72
Tensile Modulus	ISO 527	MPa	8000
Tensile Elongation, Break	ISO 527	%	2.1
Flexural Strength	ISO 178	MPa	90
Flexural Modulus	ISO 178	MPa	7900

Thermal Properties	Standard	Unit	Typical Value
Glass Transition Temperature (Tg)	DSC	°C	158
Deflection Temperature at 0.45 MPa (66psi)	ISO 75	°C	150

Electrical Property	Standard	Unit	Typical Value
Surface Resistance	ASTM D257	Ohm/sq	>10 ⁸

Printed Specimen Conditions

Printer: Open Source FDM/FFF

Nozzle: 0.4mm

Layer Height: 0.25mm

Infill: 100%, +/- 45°

Extrusion Temp: 285°C

Bed Temp: 110°C

Specimen Orientation: XY Flat