



**Technical Data Sheet:** CarbonX™ 20% Carbon Fiber PEEK 3D Printing Filament

Physical Properties	Standard	Unit	Typical Value
Density	ISO 1183	g/cc	1.39

Mechanical Properties	Standard	Unit	Typical Value
Tensile Strength, Break	ISO 527	MPa	126
Tensile Modulus	ISO 527	MPa	10,100
Tensile Elongation, Break	ISO 527	%	1.9
Flexural Strength	ISO 178	MPa	145
Flexural Modulus	ISO 178	MPa	11,200

Thermal Properties	Standard	Unit	Typical Value
Glass Transition Temperature (Tg)	DSC	°C	143
Heat Deflection Temperature at 1.8 MPa	ISO 75	°C	305

Electrical Property	Standard	Unit	Typical Value
Surface Resistance	ASTM D257	Ohm/sq	<10 <sup>6</sup>

Printed Specimen Conditions
Printer: Open Source FDM/FFF
Nozzle: 0.4mm
Layer Height: 0.25mm
Infill: 100%, +/- 45°
Extrusion Temp: 420°C
Bed Temp: 140°C
Specimen Orientation: XY Flat