3D printing solutions for high performance materials

CF-PC Technical Data Sheet (TDS)

CF-PC is reinforced with the carbon fiber, that features a very high strength to weight ratio. The thermal resistance of is one of the highest among the 3D printing filaments. It is a type of high molecular polymer containing carbonate groups in the molecular chain.

CF-PC is an engineered composite PC filament combining excellent strength, toughness, heat resistance and printing quality. It is the ideal choice for a wide range of engineering application

It also has good wear resistance, good self-lubrication, high toughness, good melt fluidity, precise printing accuracy, smooth appearance, extremely low shrinkage, and natural gloss.

Physical Properties	Standard	Unit	Typical Value
Density	ISO 1183	g/cc	1.38

Mechanical Properties	Standard	Unit	Typical Value
Tensile Strength, Break	ISO 527	MPa	72
Tensile Modulus	ISO 527	MPa	6205
Tensile Elongation, Break	ISO 527	%	2.5
Flexural Strength	ISO 178	MPa	92
Flexural Modulus	ISO 178	MPa	5880

Thermal Properties	Standard	Unit	Typical Value
Glass Transition Temperature	DSC	℃	143
Deflection Temperature @ 0.45MPa	ISO 75	℃	135

Electrical Property	Standard	Unit	Typical Value
Surface Resistance	ASTM D257	Ohm/sq	> 10^9

Print Recommendation	
Nozzle Temperature	230 -260 ℃
Bed Temperature	100 -120 ℃
Print Speed	30-70 mm/s
Chamber Temperature	70-90 ℃
Cooling Fan	Off