



## MATERIAL DATA SHEET:

## CARBON PEEK

### DESCRIPTION:

Carbon PEEK is a carbon-fiber-reinforced PEEK. The reinforcement made with 10% chopped carbon fibers improves the compressive strength, stiffness, and load capacity of PEEK.

Carbon PEEK is considered among the strongest of all thermoplastics at room temperature because it offers superlative properties that, together with its optimal wear and abrasion resistance, make it ideal for the substitution of metals in more extreme environments.

It is very resistant to hydrolysis in boiling water and superheated steam, as well as to organics, acids, and bases.

### MATERIAL SPECIFICATION:

Property	Operating Conditions	Units	Orientation				Test Method
			XZ	XY 0°	XY 45°	ZX	
Tensile Strength	25°C	MPa	139	136	125.8	28.2	ASTM D638
Tensile Modulus	25°C	GPa	10.7	9.1	8.1	4.0	ASTM D638
Heat Deflection Temperature	1.82 MPa	°C			249		ASTM D648
Property		Units	Value				Test method
Specific Density		g/cm <sup>3</sup>	1.33				ASTM D792
UL 94 Flame Class Rating*		N/A	V0				UL 94
Colour		N/A	Beige				N/A
Melting Temperature		°C	345°C				DSC

\*Test Performed on a polymer matrix sample without re-inforcing face manufactured by injection moulding.

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