



TECHNICAL DATA SHEET

CHOPPED CARBON-CARBON COMPOSITE GRADE PROPERTIES

Benefits

- High strength and modulus
- Fire resistant and dimensionally stable
- Configuration of Carbon Fabric
- Fatigue and fracture resistant. Cracks will not propagate as with molded graphite fixtures
- Lightweight
- Low Thermal Mass
- Thermal Deformation resistant

Typical Applications

- Aerospace and military
- Heat treating and furnace fixtures
- Primary and secondary structures
- Windmill blades
- Brake linings, automotive, and tooling
- Solid rocket nozzles

Technical Specifications

Typical Physical Properties						
Type	Unit	-	PC70	PC70H	PC40	PC30
Fiber Direction / Length	-		Random/Short	Random/Short	Random/Short	Random/Short
Bulk Density	g/cm ³		1.65	1.7	1.65	1.65
Flexural Strength	MPa		200	220	180	180
Tensile Strength	MPa		120	145	160	120
Youngs Modulus	GPa		45	50	75	45
Compressive Strength	MPa		120	200+	190	110
Interlaminar Shear Strength	MPa		19	19+	16	16
(Room Temp - 1300°C)	10 ⁻⁶ /°C		1.3	1.3	0.3	1.1
Coefficient of Thermal Expansion	10 ⁻⁶ /°C	⊥	10	10	10.6	10
Thermal Conductivity	W/m·K		35	35	130	100
	W/m·K	⊥	12	12	29	20
Specific Heat	J/Kg·K	20°C	720	720	740	720
Electrical Resistivity	μΩcm		2000	1800	1200	1400
Charpy Impact Strength	KJ/m ²		20	20	20	20
Hardness	Shore D		75	75	75	70
Temperature Rating	°F		2000	2000	2400	2400
	°C		3632	3632	4352	4352

KEY - || Parallel to Fiber Axis, ⊥ Perpendicular to Fiber Axis.