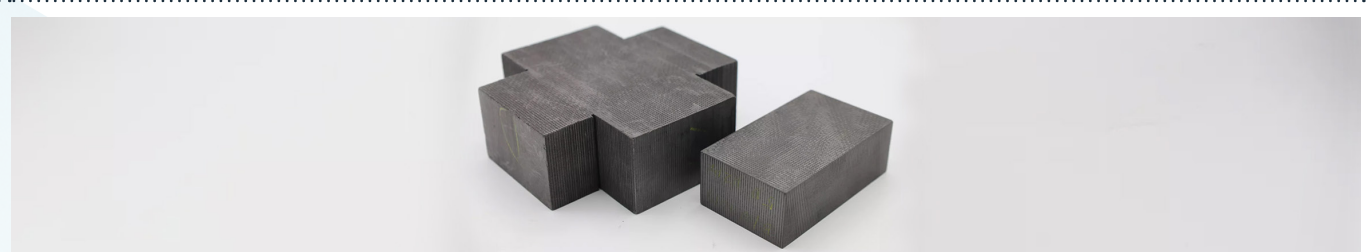


FINWEAVE™ PIERCED FABRIC (FWPF)

CARBON/CARBON COMPOSITE



QUICK SUMMARY

- > High ablative and mechanical performance 3D Carbon/Carbon

Textron Systems produces high-performance ablative material for reentry nosetips and high temperature protection applications. Orthogonally reinforced 3D Carbon/Carbon (C/C) is used for areas of a reentry vehicle exposed to high heat fluxes, such as nose tips and leading edges. Textron Systems' Fineweave™ process produces high density, high-strength blocks that can be manufactured into a variety of shapes. This material is resistant to extreme impact load due to its ability to withstand extremely high temperatures and high energy absorption capability.

Density, g/cc	1.95 (min)	Compression Strength (Z), psi	16,900
Tensile Strength (X), psi	32,800	Compression Modulus (Z), psi	9.5x10 ⁶
Tensile Modulus (X), psi	12.1x10 ⁶	Tensile strength (XY), psi	4,200
Compression Strength (X), psi	19,700	Thermal Expansion at 4000 °F (X), in/in	3.80 x 10 ⁻³
Compression Modulus (x), psi	12.3x10 ⁶	Thermal Expansion at 4000 °F (X), in/in	3.71 x 10 ⁻³
Torsional Shear (Z), psi	1,360	Thermal Conductivity	
Tensile Strength	24,970	at 500°F (X) BTU-in / hr-ft ² °F	920
Tensile Modulus (Z), psi	10.3x10 ⁶	at 1500°F (X) BTU-in / hr-ft ² °F	567
		at 500°F (X) BTU-in / hr-ft ² °F	645
		at 1500°F (X) BTU-in / hr-ft ² °F	460

Additional information available

[TextronSystems.com](https://www.textron.com)



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