

Fiberforge Carbon/PPS Unidirectional Blank

Representative Material Data

Material	Fiber	Carbon
	Matrix	PPS
	Laminate Orientation	[0]_n

Property	Test Standard	Units	Quantity
Fiber Content by Weight	ASTM D 3171	%	66
Areal Weight		g/m ²	225
Density	ASTM D 3173	g/cm ³	1.6
Minimum Blank Thickness		mm	0.20

Mechanical				
Property	Test Standard	Units	Longitudinal	Transverse

Tensile

Strength	ASTM D 3039	MPa	1,780	77
Modulus	ASTM D 3039	GPa	134	9.0
Elongation at Break (calculated) ...	ASTM D 3039	%	1.3	0.9

Flexural

Modulus (calculated)	ASTM D 790	GPa	138	9.4
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Compressive

Strength (calculated)		MPa	1,600	30
Poisson's Ratio (calculated)		—	0.27	

Thermal				
Property	Test Standard	Units	Longitudinal	Transverse

Coefficient of Thermal Expansion (calculated)	ASTM E 831	μm/m°C	-0.23	40
Processing Temperature		°C	320-350	

This data sheet lists common material, mechanical, and thermal characteristics of only one possible anisotropic tailored blank. Blanks can be made:

- thicker by adding plies
- to a desired shape, including cut-outs, to reduce scrap on final forming
- with different and/or additional ply-angles to change the anisotropic nature of the material
- with variable thickness/number of lamina.

Materials available off-the shelf or by special order.

Fiber:	Matrix:
Carbon	PA
Glass	PBT
Aramid	PEKK
	PE
	PPS
	PEEK
	PET
	TPU
	PP
	PEI
	Others

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