

GRAFIL 34-700

Grafil 34-700 carbon fiber is a continuous, high strength, PAN based fiber. It is available in 12K and 24K filament count tows. They can be supplied in either round tow or flat tow formats. The flat tow (designated by 'WD') is the ideal fiber to use in applications where spreading is required, e.g., tape production. The round tow is used in applications where spreading is not necessarily required, e.g., braiding and weaving.

Typical Fiber Properties

Tow Tensile	Strength	700 4830	ksi MPa	SRM 16
	Modulus	34 234	msi GPa	
Typical Density		0.065 1.80	lb.in ³ g/cm ³	SRM 15
Typical Yield	12K	620 800	yds/lb mg/m	SRM 13
	24K	310 1600	yds/lb mg/m	SRM 13

Typical Mechanical Properties

Tensile Properties	0°	Strength	373 2572	ksi MPa	ASTM D3039 / 0°8ply
		Modulus	19.9 137	msi GPa	ASTM D3039 / 0°8ply
	90°	Strength	11.17 81	ksi MPa	ASTM D3039 / 0°16ply
		Modulus	1.34 9.2	msi GPa	ASTM D3039 / 0°16ply
Compressive Properties	0°	Strength	198 1365	ksi MPa	ASTM D3410 / 0°16ply
		Modulus	18.5 127	msi GPa	ASTM D3410 / 0°16ply
	90°	Strength	28.5 196	ksi MPa	ASTM D3410 / 0°20ply
		Modulus	1.49 10.2	msi GPa	ASTM D3410 / 0°20ply
Flexural Properties	0°	Strength	253 1745	ksi MPa	ASTM D790 / 0°16ply, L/D=32, Vf=61%
		Modulus	19.1 132	msi GPa	ASTM D790 / 0°16ply, L/D=32, Vf=61%
	90°	Strength	14.9 102	ksi MPa	ASTM D790 / 0°16ply, L/D=16, Vf=61%
		Modulus	1.28 8.8	msi GPa	ASTM D790 / 0°16ply, L/D=16, Vf=61%
ILSS		Strength	14.1 97	ksi GPa	ASTM D2344 / 0°16ply, L/D=4, Vf=59%

- 250F Epoxy Prepregs
- Resin: Mitsubishi Rayon #340 resin system
- Tensile and compressive properties are normalized to 60% fiber volume

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