



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

## Typical Mechanical Properties

Tensile Properties	0°	Strength	373 ksi 2572 MPa	ASTM D3039 / 0°8ply
		Modulus	19.9 msi 137 GPa	ASTM D3039 / 0°8ply
	90°	Strength	11.17 ksi 81 MPa	ASTM D3039 / 0°16ply
		Modulus	1.34 msi 9.2 GPa	ASTM D3039 / 0°16ply
Compressive Properties	0°	Strength	198 ksi 1365 MPa	ASTM D3410 / 0°16ply
		Modulus	18.5 msi 127 GPa	ASTM D3410 / 0°16ply
	90°	Strength	30.5 ksi 210 MPa	ASTM D3410 / 0°20ply
		Modulus	1.49 msi 10.2 GPa	ASTM D3410 / 0°20ply
Flexural Properties	0°	Strength	253 ksi 1745 MPa	ASTM D790 / 0°16ply, L/D=32, Vf=61%
		Modulus	19.1 msi 132 GPa	ASTM D790 / 0°16ply, L/D=32, Vf=61%
	90°	Strength	14.9 ksi 102 MPa	ASTM D790 / 0°16ply, L/D=16, Vf=61%
		Modulus	1.28 msi 8.8 GPa	ASTM D790 / 0°16ply, L/D=16, Vf=61%
ILSS	Strength	14.1 ksi 97 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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