

Carbon Fiber Rectangular Solid Rods - Epoxy 3 Series



Carbon Fiber Rectangular Solid Rod are manufactured through a process referred to as pultusion. Continuous fibers combined with a resin matrix are pulled through a heated steel forming die. As the carbon fibers are saturated with the resin mixture and then pulled through a rectangular die, the hardening of the resin is initiated by the heat from the die and a rigid, cured structure is formed in the shape and size of the die. The majority of the fibers are running in the 0 degree direction, along the length of the rod, to produce an extremely stiff and lightweight with incredible linear strength.

Physical Properties

Thickness/Width	.220" +/- .008", .092" +/- .005"	Test Method-Caliper
Straightness	Not specified or controlled	For reference only
Color	Natural dark gray to black	No color match
Surface Finish	Small scratches, surface defects, or blemishes may be apparent.	Mimimum-Visual
Composite Type	0° unidirectional orientation	For reference only
Resin Type	Bisphenol F epoxy 100C	For reference only
Fiber Type	33 to 35 MSI standard modulus carbon fiber	For reference only
Fiber Volume	65%	+/- 5%
Cuts	Rough abrasive cut both ends, small burrs may be apparent.	Mimimum-Visual
Cleaning	Product blown off with dry air, some dust may be apparent.	Mimimum-Visual

Technical Properties

Tensile Strength	250 ksi / 1.72 GPa
Tensile Modulus	20.0 msi / 138 GPa
Ultimate Shear Strength	6.0 ksi / 41.3 Mpa
Ultimate Tensile Strain	1.50%
Flexural Strength	265 ksi / 1.83 GPa
Flexural Modulus	19.0 msi / 131 GPa
CTE	-0.1 ppm/cm3 / -0.2 ppm/°C
Density	.054 lbs/in3 / 1.5 g/cm3
Glass Transition Temp.	100° C
Thermal Properties	150°F maximum

Sample data is measured from a .156" diameter solid rod with standard modulus fibers and Bisphenol Epoxy Vinyl Ester

All the information contained in these properties is believed to be reliable. It is intended for comparison purposes only as each manufactured lot will exhibit variations. The user should evaluate the suitability of each product for their application. We cannot anticipate the variations in all end use and we make no warranties and assume no liability in connection with the use of this information.

Carbon Fiber Rectangular Solid Rods - Vinyl Ester 3 Series



Carbon Fiber Rectangular Solid Rod are manufactured through a process referred to as pultusion. Continuous fibers combined with a resin matrix are pulled through a heated steel forming die. As the carbon fibers are saturated with the resin mixture and then pulled through a rectangular die, the hardening of the resin is initiated by the heat from the die and a rigid, cured structure is formed in the shape and size of the die. The majority of the fibers are running in the 0 degree direction, along the length of the rod, to produce an extremely stiff and lightweight with incredible linear strength.

Physical Properties

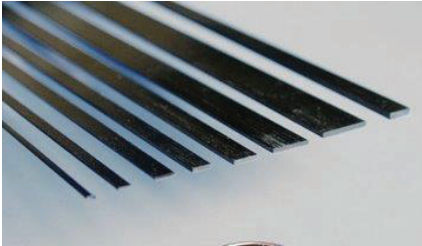
Thickness/Width	+/- .005"	Test Method-Caliper
Straightness	Not specified or controlled	For reference only
Color	Natural dark gray to black	No color match
Surface Finish	Small scratches, surface defects, or blemishes may be apparent.	Mimimum-Visual
Composite Type	0° unidirectional orientation	For reference only
Resin Type	Bisphenol Epoxy Vinyl Ester	For reference only
Fiber Type	33 to 35 MSI standard modulus carbon fiber	For reference only
Fiber Volume	60%	+/- 5%
Cuts	Rough abrasive cut both ends, small burrs may be apparent.	Mimimum-Visual
Cleaning	Product blown off with dry air, some dust may be apparent.	Mimimum-Visual

Technical Properties

Tensile Strength	250 ksi / 1.72 GPa
Tensile Modulus	20.0 msi / 138 GPa
Ultimate Shear Strength	6.0 ksi / 41.3 Mpa
Ultimate Tensile Strain	1.50%
Flexural Strength	265 ksi / 1.83 GPa
Flexural Modulus	19.0 msi / 131 GPa
CTE	-0.1 ppm/cm3 / -0.2 ppm/°C
Density	.054 lbs/in3 / 1.5 g/cm3
Glass Transition Temp.	100° C
Thermal Properties	150°F maximum

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Carbon Fiber Rectangular Solid Rods - Epoxy 5 Series



Carbon Fiber Rectangular Solid Rod are manufactured through a process referred to as pultusion. Continuous fibers combined with a resin matrix are pulled through a heated steel forming die. As the carbon fibers are saturated with the resin mixture and then pulled through a rectangular die, the hardening of the resin is initiated by the heat from the die and a rigid, cured structure is formed in the shape and size of the die. The majority of the fibers are running in the 0 degree direction, along the length of the rod, to produce an extremely stiff and lightweight with incredible linear strength.

Physical Properties

Thickness/Width	+/- .005"	Test Method-Caliper
Straightness	Not specified or controlled	For reference only
Color	Natural dark gray to black	No color match
Surface Finish	Small scratches, surface defects, or blemishes may be apparent.	Minimum-Visual
Composite Type	0° unidirectional orientation	For reference only
Resin Type	Bisphenol F epoxy	For reference only
Fiber Type	33 to 35 MSI standard modulus carbon fiber	For reference only
Fiber Volume	67%	+/- 5%
Cuts	Rough abrasive cut both ends, small burrs may be apparent.	Minimum-Visual
Cleaning	Product blown off with dry air, some dust may be apparent.	Minimum-Visual

Technical Properties

Tensile Strength	320 ksi / 2.34 GPa
Tensile Modulus	19.5 msi / 134 GPa
Compressive Strength	270 ksi / 1.90 GPa
Compressive Modulus	19.0 msi / 131 GPa
Ultimate Tensile Strain	1.30%
Glass Transition Temp.	100° C
Thermal Properties	150°F maximum

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Carbon Fiber Rectangular Solid Rods - Vinyl Ester 5 Series



Carbon Fiber Rectangular Solid Rod are manufactured through a process referred to as pultusion. Continuous fibers combined with a resin matrix are pulled through a heated steel forming die. As the carbon fibers are saturated with the resin mixture and then pulled through a rectangular die, the hardening of the resin is initiated by the heat from the die and a rigid, cured structure is formed in the shape and size of the die. The majority of the fibers are running in the 0 degree direction, along the length of the rod, to produce an extremely stiff and lightweight with incredible linear strength.

Physical Properties

Thickness/Width	+/- .005"	Test Method-Caliper
Straightness	Not specified or controlled	For reference only
Color	Natural dark gray to black	No color match
Surface Finish	Small scratches, surface defects, or blemishes may be apparent.	Minimum-Visual
Composite Type	0° unidirectional orientation	For reference only
Resin Type	Bisphenol Epoxy Vinyl Ester	For reference only
Fiber Type	33 to 35 MSI standard modulus carbon fiber	For reference only
Fiber Volume	62%	+/- 5%
Cuts	Rough abrasive cut both ends, small burrs may be apparent.	Minimum-Visual
Cleaning	Product blown off with dry air, some dust may be apparent.	Minimum-Visual

Technical Properties

Tensile Strength	250 ksi / 1.72 GPa
Tensile Modulus	20.0 msi / 138 GPa
Ultimate Shear Strength	6.0 ksi / 41.3 Mpa
Ultimate Tensile Strain	1.50%
Flexural Strength	265 ksi / 1.83 GPa
Flexural Modulus	19.0 msi / 131 GPa
CTE	-0.1 ppm/cm3 / -0.2 ppm/°C
Density	.054 lbs/in3 / 1.5 g/cm3
Glass Transition Temp.	100° C
Thermal Properties	150°F maximum

All the information contained in these properties is believed to be reliable. It is intended for comparison purposes only as each manufactured lot will exhibit variations. The user should evaluate the suitability of each product for their application. We cannot anticipate the variations in all end use and we make no warranties and assume no liability in connection with the use of this information.