



PRODUCT DESCRIPTION

YOUSU PA6-CF nylon filament 1.75mm is made of 85% PA and 15% chopped carbon fibers. The carbon fiber reinforcement really provides significantly improved stiffness, strength and heat resistance with outstanding layer adhesion. Strong, durable and features an excellent heat resistance. It can be used in applications requiring torsional , tensile, and impact strength such as bicycle pedals, brackets, jigs, ESD safe fixtures, drone frame, prosthetics or handles

Properties	ASTM	Unites	Test Condition	Typical Value
Physical Properties				
Density	D792	g/cm³	25℃	1.09
Melt Flow Rate	D1238	g/10min	210℃, 2.16Kg	6.1~7.5
Mechanical Properties				
Tensile Strength (X-Y)	D638	MPa	5mm/min	81~83
Tensile Strength (Z)	D638	MPa	5mm/min	16~17
Tensile Modulus (X-Y)	D638	MPa	5mm/min	834~916
Elongation (X-Y)	D638	%	5mm/min	9.5~10.5
Flexural Strength (X-Y)	D790	MPa	2mm/min	108~113
Flexural Modulus (X-Y)	D790	MPa	2mm/min	5530~5811
Impact Strength, IZOD notched (X-Y)	D256	KJ/m²	4mm,23℃	6.4~7.1
Thermal Properties				
Heat Distortion Temp.	D648	℃	0.45MPa	180

Applications

YOUSU PA6-CF 3D FILAMENT is specially designed for 3D printing bicycle pedals, brackets, jigs, ESD safe fixtures, drone frame, prosthetics or handles.

Processing Information

YOUSU PA6-CF 3D FILAMENT, as a composite and abrasive filament, carbon fiber filaments will destroy your standard brass nozzles. The carbon fibers are tougher than the brass, and will decimate it in no time at all. Therefore, for carbon fiber 3D printing, you'll need either a hardened steel nozzle, or even a ruby-tipped nozzle. We advice use 0.6mm or bigger nozzle. Before printing, no matter it is new opened or not, we advice to dry it at the temperture of 60-80℃ about 6-8 hours to avoid moisture. Also, we advice use closed box printer which can have constant temperature control system is better.

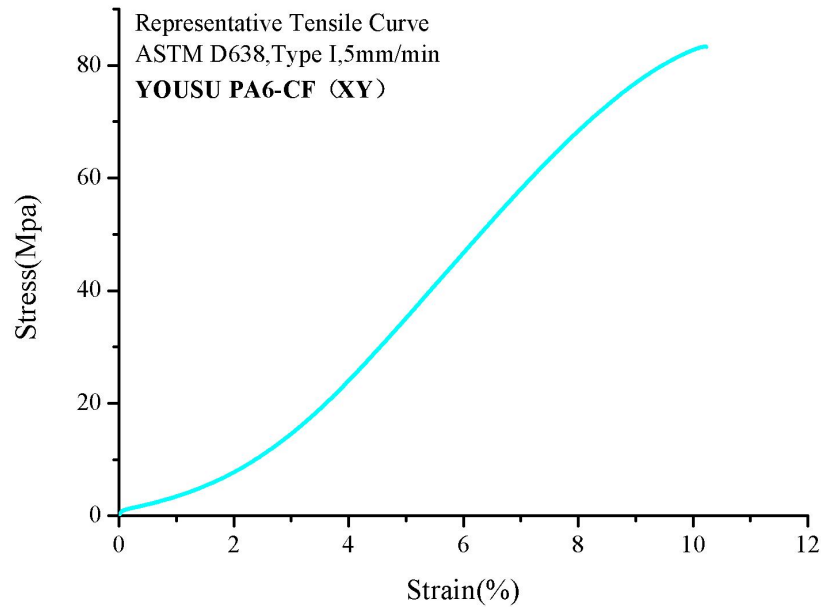
Basic Parameters

Product Code	YS-PA6-CF
Material	PA6-CF
Diameter	1.75mm
Printing Temp	260℃~290℃
Print Bed Temp	80℃~100℃
Cooling fan	0%
Printing speed	<100mm/s

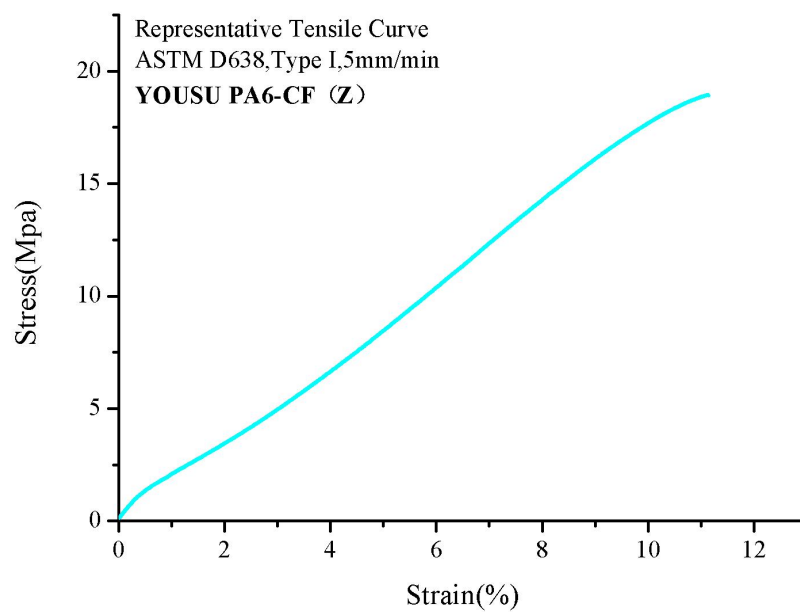
All information provided and recommendations made herein are intended to assist customers in determining whether our products are suitable for their applications. We request that customers inspect and test our products before use in order to make their own final decision regarding suitability. We do not guarantee results, freedom from patent infringement, or suitability of resultant products for any suggested application with respect to the use of any formula or material described herein.

MECHANICAL PROPERTIES

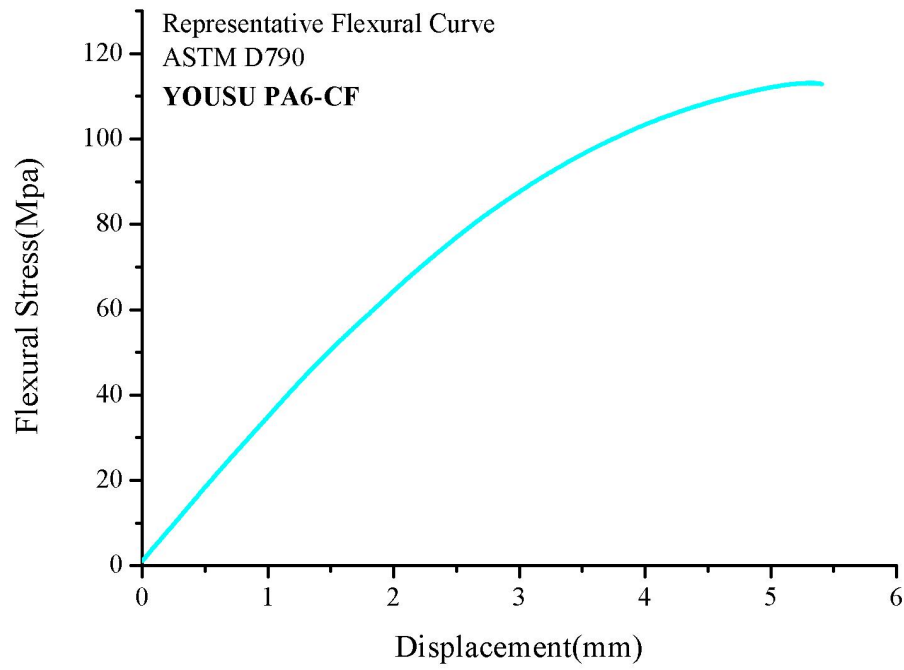
Representative Tensile(X-Y) Curve



Representative Tensile(Z) Curve



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Representative Flexural Curve

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