



## PRODUCT DESCRIPTION

YOUSU PA12-CF 3D FILAMENT, is widely used in a variety of industries due to its excellent chemical resistance, high temperature performance, low moisture absorption, and higher rigidity compared to common Nylon 6 blended materials. YOUSU PA12 CF formulation ensures very low shrinkage in the printed part resulting in excellent dimensional stability

Properties	ASTM	Unites	Test Condition	Typical Value
<b>Physical Properties</b>				
Density	D792	g/cm <sup>3</sup>	25°C	1.06
Melt Flow Rate	D1238	g/10min	210°C, 2.16Kg	13.5~16.4
<b>Mechanical Properties</b>				
Tensile Strength (X-Y)	D638	MPa	5mm/min	58~63
Tensile Strength (Z)	D638	MPa	5mm/min	14~16
Tensile Modulus (X-Y)	D638	MPa	5mm/min	495~592
Elongation (X-Y)	D638	%	5mm/min	14.8~17.1
Flexural Strength (X-Y)	D790	MPa	2mm/min	96~102
Flexural Modulus (X-Y)	D790	MPa	2mm/min	3193~3484
Impact Strength, IZOD notched (X-Y)	D256	KJ/m <sup>2</sup>	4mm,23°C	16.4~19.2
<b>Thermal Properties</b>				
Heat Distortion Temp.	D648	°C	0.45MPa	185

## Applications

YOUSU PA12-CF 3D FILAMENT is specially designed for functional prototyping/Grips/Guides/Hinges/Sleeves/Snap-fit parts/Protective cases

## Processing Information

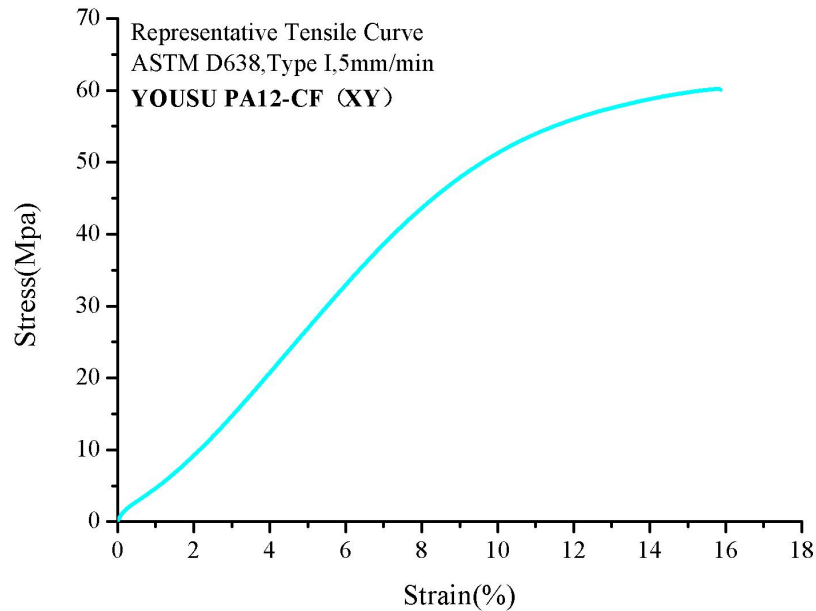
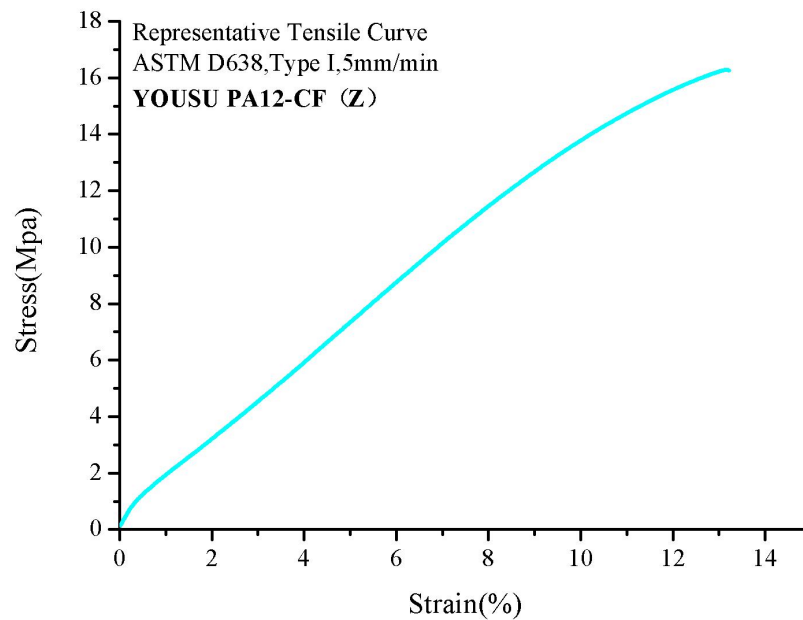
YOUSU PA12-CF 3D FILAMENT, as a composite and abrasive filament, carbon fiber filaments will destroy your standard brass nozzles. The carbon fibers are tougher than the brass, and will decimate it in no time at all. Therefore, for carbon fiber 3D printing, you'll need either a hardened steel nozzle, 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 temperature of 60-80°C 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-PA12-CF
Material	PA12-CF
Diameter	1.75mm
Printing Temp	260°C~290°C
Print Bed Temp	80°C~100°C
Cooling fan	0%
Printing speed	<100mm/s

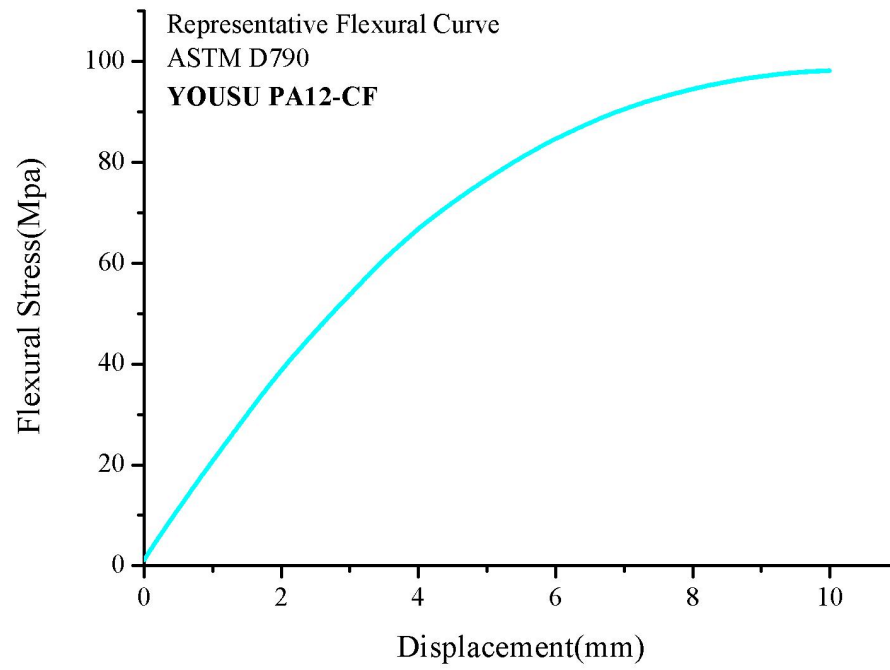
All information provided and recommendations made herein are intended to assist customers in determining whether our products are suitable for their applications. We request that customers inspect and test our products before use in order to make their own final decision regarding suitability. We do 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.

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**MECHANICAL PROPERTIES****Representative Tensile(X-Y) Curve****Representative Tensile(Z) Curve**

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Representative Flexural Curve

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