

# SELECT™

## NYLONPOWER CARBON FIBER

### Why should I use SELECT™ NYLON-POWER CARBON FIBER?

- High chemical and thermal resistance
- Excellent surface quality
- Less warping than regular nylon
- Easy to print
- Creates very strong parts.



### SELECT™ NYLONPOWER CARBON FIBER

SELECT NylonPower Carbon Fiber is the latest generation of high performance material for your 3D Printer. Our SELECT NylonPower is based on Nylon 12 and is reinforced with 20 % carbon fibers. This makes for an extremely tough filament that is perfect for printed parts that can be used in the automotive industry, drones and RC parts.

SELECT NylonPower Carbon Fiber is a very useful material that has very unique properties. Mixed with small, chopped carbon fiber strands, SELECT NylonPower filament offers incredible rigidity, structure, and great interlayer adhesion. NylonPower is very easy to print with and has a matt surface when done. The finished prints are very stiff and rigid and are very useful if you need an object with high stiffness to weight ratio. SELECT NylonPower requires a heated bed, set to 60-70°C to get a good first layer adhesion.

Due to the abrasive nature of SELECT NylonPower we recommend that you use a hardened steel nozzle for this filament. Using a regular brass nozzle isn't a problem but it will wear out the nozzle in a short time.



\* Please see our website for latest options and colors available.

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## NYLONPOWER CARBON FIBER



### INFORMATION:

SELECT NylonPower sticks on glass coated with adhesive spray or glue stick.

- Weight and spool**  
 Each spool come with 500 grams of high quality filament. NylonPower comes on a clear spool with a powerful desiccant to avoid moisture.
- Perfect diameter toleranc**  
 NylonPower is controlled during the whole manufacturing process. This ensures that you have a filament with a diameter tolerance of +/-0.05 mm.
- Spooling**  
 We put great effort to make every spool perfect. This is to make you comfortable knowing that the filament won't tangle on the spool.
- Easy to print**  
 The fibers that are mixed with nylon makes this material very easy to print on most printers. We do, however, recommend a hardened nozzle.

### TIPS AND TRICK:

#### Take care of your filament:

Thanks to the Carbon fibers in NylonPower it reduces the amount of water that can be absorbed.

What you need to keep in mind is that NylonPower is a Nylon filament from the beginning, so you need to make sure that the filament is completely dry before using it. NylonPower is shipped in a vacuum sealed bag with desiccant so the first print shouldn't post any problem.

In case of exposure for humidity we strongly recommend that you dry your spool of NylonPower before you begin to print. To do this, just place the whole spool in the oven at 80°C for 5 to 7 hours. Then you have dried you spool and can start a new print again.

#### How to print:

NylonPower requires a temperature of 250°C - 265°C to extrude correctly. The filament can be printed on most printers, but we highly recommend that you use an all-metal setup for your extruder. NylonPower can be printed at lower temperatures but please keep in mind that you will not get the same strength in the finished parts.

This filament contains carbon fibers, so it is very abrasive for your nozzle. We HIGHLY recommend that you use a hardened steel nozzle for this filament as a regular brass nozzle will wear out in a very short time.

Larger nozzles of 0.6 or 0.8 creates very strong prints and lower the risks of clogging up the nozzle. But it ok to use with a 0.4 mm nozzle as well.

NylonPower does not stick well to PEI, BuildTak or similar surfaces. Glass is the best surface to use coated with MagiGoo, PrintaFix, PVA based glue stick or similar. When printing with NylonPower you should not use any cooling fans.

### Dimensions

Diameter	Value and Tolerances
1,75 mm	1.75 ± 0.05 mm
2,85	2.85 ± 0.05 mm

### Physical properties

Description:	Testmethod
Roundness deviation	max 2%
Suggested print temperature (guideline)	Between 250°C and 265°C
Suggested print speed	40 mm/s
Suggested bed temperature	60°C/70°C

### Mechanical properties

Description:	Testmethod - ISO	Typical value
Density	1183	1,00 g/cm <sup>3</sup>
Melting point	11357	180°C
Tensile Modulus	527	6000 MPa
Tensile Strength	527	100 MPa
Impact strength	179/2-1eU	60 kJ/m <sup>2</sup>
Ball indentation hardness	2039-1	110 MPa
Heat deflection temp. HDT/A	75	155°C
Thermal expansion coefficient	11359	0,5 10 <sup>-4</sup> /K
Max usage Temp. long term	2578	90-120°C
Max usage Temp. short term	2578D	150°C
Dielectric strength	IEC 60243	-
Specific volume resistivity	IEC 60243	10 <sup>3</sup> Ωm
Flammability	1210	HB
Linear mould shrinkage	294	0,3

Reseller: