Datasheet

Nylon CF15 Carbon

Description:

Fillamentum Nylon CF15 is a Nylon based carbon fibres reinforced material for the FFF (also known as FDM) 3D printing technology.

It is characterized not only by high strength, rigidity and high thermal or chemical resistance, but also by great processing stability and rheological properties. The material properties are preserved also at low temperatures.

Thanks to the filler, this material excels by a low thermal expansion. It is suitable for printing of frequently stressed parts, for example bearings, cogwheels, reinforcement parts etc.

The use of the material in the food or medical industry is not recommended.

For filaments with fillers, Fillamentum guarantees dimensions within the tolerance +/- 0,10 mm, which are strictly controlled throughout production.

This material contains milled carbon fibres 100 µm long.

Note: The Nylon CF15 filament has abrasive properties. It means that it will accelerate the nozzle-wear of brass nozzles faster than unfilled filaments. The hardened steel nozzles are recommended.



Physical properties	Typical Value	Test Method	Test Condition
Material density	1,08 g/cm^3	ISO 1183	20 °C
	0,96 g/cm^3	ISO 1183	235 °C
Melt flow index	9,92 g/10 min	ISO 1133	235 °C, 2,16 kg
Diameter tolerance	± 0,10 mm		
Weight	600 g of filament (+ 250 g spool)		

Mechanical properties	Typical Value	Test Method	Test Condition
Tensile strength	54,5 MPa	ISO 527	50 mm/min
Elongation at break	103 %	ISO 527	50 mm/min
Tensile modulus	500 MPa	ISO 527	50 mm/min
Charpy impact resistance	86,2 kJ/m^2	ISO 179	25 °C, unnotched
Hardness	75 Shore D	ISO 7619	

Thermal properties	Typical Value	Test Method	Test Condition
Melting temperature	160 °C		

Printing properties	Typical Value	Test Method	Test Condition
Print temperature	235–260 °C		
Hot pad	80–100 °C		

Workability of 3D printing filament is at least 12 months from delivery.
The information was processed with the best knowledge of the manufacturer and it is for information only.

Parzlich s.r.o.
nam. Miru 1217, 768 24 Hulin
Czech Republic

(+420) 720 060 947
helpdesk@fillamentum.com
www.fillamentum.com