

TEHNNICAL DATA SHEET

PLA CF (CARBON FIBER)

Date of issue: 09.11.2018

Date of update: 24.01.2023

Product description:

PLA CF (Carbon Fiber) is a composite filament made by blending PLA (Polylactic Acid) with short carbon fibers. This combination provides improved mechanical properties, such as increased rigidity, strength, and reduced weight, while maintaining the ease of printing associated with PLA. It is ideal for producing lightweight, durable parts with excellent surface finish and dimensional stability.

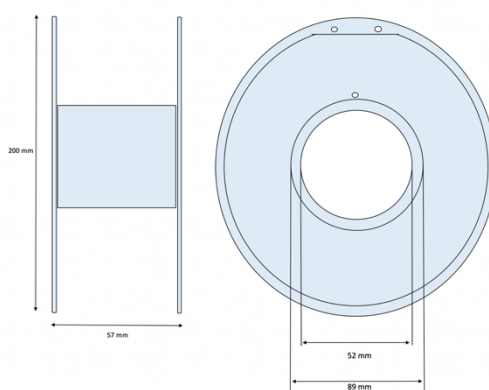
Storage:

Store in dry area, in a closed container away from moisture.

PRODUCT PARAMETERS

Parameter	Value
Filament diameter [mm]	1.75
Diameter tolerance [mm]	+/- 0,002
Oval tolerance [mm]	+/- 0,01

Spool dimensions [mm] (ø / height / hole ø)	200/57/52
Spool weight [g]	325
Spool material	Transparent PC
Weight with packaging [g]	1 550
Net weight [g]	1 000
Box dimensions [mm]	203/207/70



RECOMMENDED PRINTING PARAMETERS

Parameter	Value
Print temperature [°C]	200-230
Bed temperature [°C]	None needed or 50-70 if applicable
Cooling [%]	50-100 depending on the part geometry
Closed chamber	Not required, but may improve print
Chamber temperature [°C]	30-50
Printing Speed [mm/s]	30-60
Nozzle type	Hardened steel or ruby

PHYSICAL PARAMETERS OF THE MATERIAL

Parameter	Value	Unit	Test method
Density	1.30	g/cc	D792
Melt flow rate	6-12	g/10min	D1238
Vicat softening temp.	70-80	°C	ISO 306 VST/A/50 (50°C/h,10N)
Tensile modulus	5 000	MPa	D882
Tensile strength	55-70	MPa	D882
Elongation at break	2-4	%	D882
Impact strength	5-8	KJ/m2	ISO 179 Charpy Notched @23°C (73°F)

The values above have been measured using standard test specimens made of non-colored material at room temperature. The figures should be considered as indicative values only. Actual properties of PLA CF parts can be affected by the printing parameters, design of the model, ambient conditions, application of the printout etc. It is essential that users test our products to determine whether they are suitable for their intended use.