

# TEHNICAL DATA SHEET

## TECHFORCE (NYLON VERRE/CARBONE)

Date of issue: 12.11.2018

Date of update: 27.01.2023

### Product description:

Glass and Carbon Fiber Reinforced Polyamide (Nylon) is a high-performance composite filament that blends polyamide (nylon) with glass and carbon fibers. This combination provides excellent mechanical properties, including high strength, stiffness, and thermal stability, while retaining the flexibility and toughness of nylon. It is ideal for functional prototypes, end-use parts, and applications requiring resistance to impact, wear, and high temperatures.

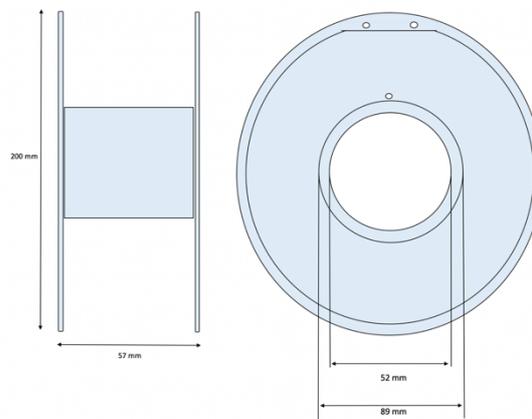
### Storage:

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

### PRODUCT PARAMETERS

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

Spool dimensions [mm] ( $\phi$ / height / hole $\phi$ )	200/57/52
Spool weight [g]	204
Spool material	Transparent SAN
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]	250-275
Bed temperature [°C]	80-110
Cooling [%]	Low or off
Closed chamber	Strongly recommended
Chamber temperature [°C]	40-60
Printing Speed [mm/s]	30-50
Nozzle type	Hardened steel or ruby

### PHYSICAL PARAMETERS OF THE MATERIAL

Parameter	Value	Unit	Test method
Density	1,35	g/cc	ISO 1183
Melt flow rate	3-6	g/10min	ISO 1133 220°C/10Kg
Vicat softening temp.	170-190	°C	ISO 306 VST/A/50 (50°C/h,10N)
Tensile modulus	8 000	MPa	ISO 527 1mm/min
Tensile strength	90-120	MPa	ISO 527 @Yield 50mm/min (2inch/min)
Elongation at break	2-4	%	ISO 527 @Break 50 mm/min (2inch/min)
Impact strength	8-12	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 TECHFORCE 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.