Technical Data Sheet

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Nylon Carbonite Filament

SECTION 1, IDENTIFICATION

Product Part Number:	F09118
Recommended Use:	3D printing filament
Restrictions on Use:	For use with 3D printers

SECTION 2, DESCRIPTION

Description:

Nylon Carbonite is a carbon fiber nylon filament that is excellent for prototyping and producing strong light-weight functional parts with an appealing semi-matte black finish.

Carbon fiber reinforced polyammide

Applications:

Jigs and fixtures
Concept modeling
Visual and functional prototyping
Manufacturing tools
End use parts
Short run manufacturing

Key Features:

Appealing semi-matte black finish
Reinforced with high-modulus carbon fiber
Chemical resistance
Durability
Subtle flexibility of nylon
Structural rigidity of carbon fiber

SECTION 3, SPECIFICATIONS

EXTRUDER TEMPERATURE	245C
BED TEMPERATURE	80C -120C
HEATED BED	Required
RECOMMENDED BUILD SURFACE	Wolfbite NITRO

DIAMETER	2.88mm
COLOR	Black
COMPATIBLE MACHINE	AXIOM, AXIOM 20, AXIOM Dual Extruder, EVO
GENERAL	
Density ISO 1183	1,00 g/cm3
Suggested print speed	40 mm/s
THERMAL	
Melting point ISO 11357	180°C
Thermal expansion coefficient ISO 11359	0,5 10-4 /K
Heat deflection temp. HDT/A ISO 75	155°C
Max usage Temp. long term ISO 2578	90-120°C
Max usage Temp. short term ISO 2578D	150°C
Specific volume resistivity ISO IEC 60243	103 Ωm
PHYSICAL	
Nominal Diameter (3mm Maximum Dia)	2.85 ± 0.05 mm
Linear mould shrinkage ISO 294	0.3
MECHANICAL	
Tensile Modulus ISO 527	6000 MPa
Tensile Strength ISO 527	100 MPa
Impact strength ISO 179/2-1eU	60 kJ/m2
Ball indentation hardness ISO 2039-1	110 MPa
UL FLAMMABILITY	
Flammability ISO 1210	HB

SECTION 4, ADDITIONAL INFORMATION

Carbon fiber reinforced filaments are abrasive and can wear out a brass or aluminum nozzle.

Drying - very important. This product is supplied dry and sealed in thick 4mil pouch with several packs of desiccant. However, it is made using nylon and will absorb more moisture than other resins when left exposed to the environment. Excessive moisture will result in popping at the nozzle (water boiling off, a

little steam) and excessive drooling and nozzle build-up. Make sure to keep this filament in a dry location between uses. If the filament does get wet, you can dry it out with a basic toaster oven (not one for food consumption). Recommend drying for 2-3 hours at 70-80°C. The reel itself has lower thermal resistance than the nylon filament and will distort / melt before the nylon.

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