purefil
of Switzerland

Polyamid 12 carbon fiber 15% (**PA12 CF15**)

General

Our PA12 CF is an amorphous thermoplastic with 15% carbon fiber content. This leads to a significant increase in rigidity. Since PA12 is the polyamide type with the lowest water absorption, the material is ideal in humid environments where high impact strength, good sliding friction properties and good wear resistance are required. PA12 CF15 is antistatic. The carbon fiber reinforcement also increases the dimensional stability temperature of the material. Another positive effect is that the filament is even easier to print than the unreinforced PA12.
The increased wear in the printing nozzle must be taken into account and can be minimized by using hardened steel nozzles.

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advantageous

- high rigidity
- Easier to print than unreinforced PA12
- High hardness
- Antistatic
- Low shrinkage
- Low water absorption

disadvantageous

- Increased abrasion in the printing nozzle
- Hardened steel nozzle recommended
- only available in black

Processing data

Printing temperature
255-275 °C
Heated bed temperature
100-120 °C
Drying temperature
80°C
Drying time
4-16h

Technical specifications

Shrinkage (ISO 294-4)	0.2-0.5	**%**
MFR	-	g/10min
Yield stress (ISO 527-1,2)	110	MPa
Elongation at yield (ISO 527-1,2)	4.5	%
Elongation at break (ISO 527-1,2)	4.5	%
Tensile modulus (ISO 527-1,2)	9500	MPa
Heat deflection temperature 1.8 MPa (ISO 75-1,2)	160	°C
Vicat softening temperature A (ASTM D1525)	-	°C
Thermal conductivity 23°C	-	W/(K*m)
Flammability (IEC 60695-11-10)	HB	
Density (ISO 1183)	1.07	g/cm^3

purefil filaments are Made in Switzerland, by

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3d printing solutions