Innofil 3D

BASF
We create chemistry

Quick Reference Guide

PET CF15

Polyethylene Terephthalate 15% Carbon Fiber

PET CF15 is a Carbon Fiber reinforced PET which has precisely tuned material properties for a wide range of technical applications. Key properties of PET CF15 are:

- Strong and stiff parts
- Easy printing
- Very low moisture absorption
- Temperature resistant up to 74°C
- High dimensional stability
- Compatible with HIPS for breakaway support
- Excellent surface finish

PET CF15 is a high-performance and functional 3D printing material optimized to meet your requirements. Its high dimensional stability and low abrasiveness offers an easy to print experience which allows direct printing on glass or a PEI sheet. PET CF's high heat resistance, strength and stiffness make this filament highly suitable for a wide range of industrial applications. To provide users with valuable information we have collected data regarding the mechanical properties of the 3D-printed specimens according to ISO standards.

For more information go to www.innofil3d.com/material-data

	PET CF15	PAHT CF15	PP GF30	ABS FUSION+	PRO1	ABS	PP	Ultrafuse PA	Ultrafuse TPU 85A
Easy to print	+	+	-	++	++	±	-	+	++
Dimensional stability	++	++	-	+	++	-	-	±	+
Tensile strength	++	++	++	-	++	±	-	+	+
Flexural strength	+	+	+	+	++	+	±	+	±
Impact strength	-	-	-	++	±	++	++	+	++
Post processing	-	-	-	+	+	++	-	-	-
Heat resistance	±	++	+	+	+ [1)]	+	±	±	±
UV resistance	±	±	±	±	±	±	±	±	±

[1)] After annealing

Recommended Print Settings
based on 0.6 mm nozzle*

Nozzle temp.	250 - 260°C
Print speed	40 - 60 mm/s
Bed temp.	75°C
Bed modification	No, clean glass
Fill density	20%**
Extrusion width	0.6 mm
Fan speed	0%
Shell thickness	1.2 - 1.8 mm
Layer height	0.2 - 0.4 mm***

* We recommend a hardened nozzle of at least 0.6 mm to prevent clogging of the nozzle. For good strength and aesthetic results, adjust the extrusion width to the diameter of the nozzle.
** Higher infill density will create stronger and more solid parts.
*** For excellent layer adhesion a layer height of 0.2 mm is recommended. Lower layer heights can also cause clogging of the nozzle.

Professional Series
Material Portfolio

PET CF15	Strong and stiff parts, easy to process, very low moisture uptake, temperature resistant up to 74°C
PAHT CF15	Higher chemical resistance than most PA grades, high temperature resistance up to 150°C, strong and stiff parts, high dimensional stability, easy to process
PP GF30	Excellent chemical resistance, low density, low moisture uptake, high heat resistance, improved UV-resistance
ABS Fusion+	Low warp, direct printing on glass, high heat resistance
PRO1	Engineering tough PLA, high strength, tough, versatile, fast and easy printing
ASA	UV resistant, outdoor use, anti-static properties
HIPS	Suitable for sanding and painting, ABS support
PP	Low density, resistant to fatigue, chemical resistant

Visit Innofil3D.com to learn more.

Innofil3D • PO Box 1146 • 7801 BC Emmen • The Netherlands • Tel. +31 (0) 591 82 03 89 • info@innofil3d.com • www.innofil3d.com