

# alzament

## Alzament Filament

Technical Data Sheet V1.0

### PETG-CF

- **Basic Info**

**Alzament PETG-CF** is a PETG based with chopped carbon fiber reinforced FFF material that improves warping resistance, reduces size shrinkage during printing and improves overhang surface quality while giving the material a frosted surface texture.

- **Specifications**

Subjects	Data
Diameter	1.75 mm
Net Filament Weight	1 kg
Filament Length	330m
Tolerance	±0.03mm

- **Recommended Printing Settings**

Subjects	Data
Nozzle temperature	250 – 280 (°C)
Build surface material	Glass、PEI Film or Coating with PVP glue
Build plate temperature	70 - 80 (°C)
Cooling fan	≤50%
Printing speed	30-300 (mm/s)
Raft separation distance	0.2-0.25 (mm)
Retraction distance	1-3 (mm)
Retraction speed	1800-2400 mm/min

## • Properties

Alzament has tested the differing aspects in the performance of PETG-CF material, including physical and chemical properties. Typical values are listed as followed:

Physical Properties		
Subjects	Testing Methods	Data
Density	ISO 1183,GB/T1033	1.32 g/cm <sup>3</sup> at 79°C
Melt Index	220 °C, 2.16 kg	4.3 g/10 min
Light transmission	N/A	N/A
Flame retardancy	N/A	N/A

Mechanical Properties		
Subjects	Testing Methods	Data
Young's modulus (X-Y)	ISO 527, GB/T 1040	3062.7± 42.96 MPa
Young's modulus (Z)		2170.34±46.05MPa
Tensile strength (X-Y)	ISO 527, GB/T 1040	46.05 ±1.93 MPa
Tensile strength (Z)		30.29±1.19MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	5.88±0.69%
Elongation at break (Z)		1.62±1.0%
Bending modulus (X-Y)	ISO 178, GB/T 9341	3013.81±57.08MPa
Bending modulus (Z)		N/A
Bending strength (X-Y)	ISO 178, GB/T 9341	85.11±0.54MPa
Bending strength (Z)		N/A
Charpy impact strength (X-Y)	ISO 179, GB/T 1043	3.52±0.47KJ/m <sup>2</sup>

## • Additional Suggestions

1. The wear resistance of copper nozzle is poor. It is recommended to use stainless steel or hardened steel nozzle to print, which can effectively improve the printing quality.
2. Please put filament into a dry box, which can effectively reduce the oozing, rough surface and so on.

## • Disclaimer

The performance values are tested by standard samples at Alzament, and the values are for design reference and comparison only. Actual 3D printing model performance is related to many other factors, including printers, printing conditions, printing models, printing parameters, etc.

In the process of using Alzament 3D printing filaments, users are responsible for the legality, safety, and performance indicators of printing. Alzament is not responsible for the use of materials and scenarios and is not responsible for any damage that occurs in the process of using our filaments.

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