

# alzament

## Alzament Filament

Technical Data Sheet V1.0

### Hyper PLA+

#### · Basic Info

Alzament Hyper PLA+ optimizes print speed by adjusting the material's performance, balancing melting and cooling. This results in smooth filament extrusion and minimal clogging during high-speed printing, ensuring rapid cooling without deformation. It offers faster print speeds, improved surface quality, and enhanced detail representation, meeting the material demands of various high-speed 3D printers.

#### · Specifications

Subjects	Data
Diameter	1.75 mm
Net Filament Weight	1 kg
Filament Length	330m
Tolerance	±0.02mm

#### · Recommended Printing Settings

Subjects	Data
Nozzle temperature	210-230(°C)
Build surface material	Glass、PEI Film or Coating with PVP glue
Build plate temperature	45-60(°C)
Cooling fan	on
Printing speed	50-300(mm/s)
Raft separation distance	0.2(mm)
Retraction distance	3 (mm)
Retraction speed	40mm/s

## • Properties

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

<b>Physical Properties</b>		
<b>Subjects</b>	<b>Testing Methods</b>	<b>Data</b>
Density	ISO1183,GB/T1033	1.23 g/cm <sup>3</sup> at 21.5°C
Meltindex	210 °C, 2.16 kg	15.5 g/10 min
Light transmission	N/A	N/A
Flame retardancy	N/A	N/A

<b>Mechanical Properties</b>		
<b>Subjects</b>	<b>Testing Methods</b>	<b>Data</b>
Young's modulus (X-Y)	ISO527, GB/T 1040	2360± 30.1 MPa
Tensile strength (X-Y)	ISO527, GB/T 1040	42.1 ±0.6 MPa
Elongation at break (X-Y)	ISO527, GB/T 1040	23.4±6.3%
Bending modulus	ISO178, GB/T 9341	2688.7±26.1 MPa
Bending strength	ISO178, GB/T 9341	67.5±0.7MPa
Impact strength	ISO179, GB/T 1043	22.7±2.5KJ/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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