

# alzament

## Alzament Filament

Technical Data Sheet V1.0

### PLA Basic

#### · Basic Info

Alzament PLA-Basic is a product for entry-level users with cost-effective and reliable features. It supports high-speed printing and can meet most of printing needs like PLA.

#### · 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	190-220(°C)
Build surface material	Glass、PEI Film or Coating with PVP glue
Build plate temperature	45-60(°C)
Cooling fan	on
Printing speed	50-100(mm/s)
Raft separation distance	0.2(mm)
Retraction distance	1 (mm)
Retraction speed	20mm/s

## • Properties

Alzament has tested the differing aspects in the performance of PLA Basic 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	ISO 1183,GB/T1033	1.24 g/cm <sup>3</sup>
Melt Index	210 °C, 2.16 kg	42.4 ± 3.5 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)	ISO 527, GB/T 1040	2580 ± 220 MPa
Young's modulus (Z)		2060 ± 170 MPa
Tensile strength (X-Y)	ISO 527, GB/T 1040	35 ± 4 MPa
Tensile strength (Z)		31 ± 3 MPa
Elongation at break (X-Y)	ISO 527, GB/T 1040	6.3 ± 0.6%
Elongation at break (Z)		1.8 ± 0.1 MPa
Bending modulus (X-Y)	ISO 178, GB/T 9341	2750 ± 160 MPa
Bending modulus (Z)		2370 ± 150MPa
Bending strength (X-Y)	ISO 178, GB/T 9341	76 ± 5 MPa
Bending strength (Z)		59 ± 6MPa
Charpy impact strength (X-Y)	ISO 179, GB/T 1043	3.3 ± 0.2 KJ/ m <sup>2</sup>
Charpy impact strength (Z)		N/A

## • 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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