

PLA

Description:

ALP Materials PLA is a material for the FFF (also known as FDM) 3D printing technology.

The advantage of this material is that it can be used in 3D printers easily, that it allows a high quality of printing even in tricky details and an excellent lamination of the printed object.

PLA filament is made of natural ingredients and is easily biodegradable by composing.

ALP Materials guarantees high precision of filament dimensions within the tolerance of +/- 0,05 mm, which is strictly controlled throughout the production.

Printing filaments reported on the marked under the trademark ALP Materials are produced in a wide variety of colours in accordance with the colour charts RAL and Pantone, and also in own unique colour ranges.



| Physical properties | Typical Value | Test Method | Test Condition |
|---------------------|-----------------------------------|-------------|-----------------|
| Material density | 1,24 g/cm ³ | ASTM D792 | |
| Melt flow index | 6 g/10 min | ASTM D1238 | 210 °C, 2,16 kg |
| Diameter tolerance | ± 0,05 mm | | |
| Weight | 750 g of filament (+ 250 g spool) | | |

| Mechanical properties | Typical Value | Test Method | Test Condition |
|-----------------------|---------------|-------------|----------------|
| Material density | 53 MPa | ASTM D882 | |
| Melt flow index | 6% | ASTM D882 | |
| Tensile modulus | 3600 MPa | ASTM D882 | |
| Flexural strength | 83 MPa | ASTM D790 | |
| Flexural modulus | 3800 MPa | ASTM D790 | |
| Izod impact strength | 16 J/m | ASTM D256 | 23 °C, notched |

| Thermal properties | Typical Value | Test Method | Test Condition |
|------------------------------|---------------|-------------|----------------|
| Glass transition temperature | 55–60 °C | ASTM D3418 | |
| Heat distortion temperature | 55 °C | ASTM E2092 | 0,45 MPa |

| Printing properties | Typical Value | Test Method | Test Condition |
|---------------------|---------------|-------------|----------------|
| Material density | 190–210 °C | | |
| Diameter tolerance | 40–50 °C | | |
| Weight | 30–40 mm/min | | |

| Guideline for printing | Typical Value |
|----------------------------|---------------|
| Nozzle temperature | 190–210 °C |
| Bed temperature | 40–50 °C |
| Bed surface / modification | Tape or glue |
| Active cooling fan | 100% |
| Print speed | 40–80 mm/min |

Workability of 3D printing filament is at least 12 months from delivery.

The information was processed with the best knowledge of the manufacturer and it is for information only.

ALP MATERIALS

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