

TECHNICAL DATA SHEET

Premium PLA Flame Retardant

Date of issue: 20-01-2025 / Date of update: 20-01-2025



Product specifications

Premium PLA Flame Retardant is a UL 94 V0 certified PLA filament. This is the highest flammability rating. Fire will extinguish within 10 seconds.

Premium PLA Flame Retardant is durable like ABS and has a high impact strength. Its high renewable content ensures a low carbon footprint. A true sustainable alternative to oil-based filaments.

Premium PLA Flame Retardant maintains all advantages of PLA. It prints very easy and is suitable for both desktop and large format 3D printing. Its flame retardant properties make this an even more versatile filament. Printed parts provide a high level of safety in all kind of environments.

Important key features

- UL 94 V0 certified.
- Meets EN60335 Electrical Appliance Standard.
- ABS-like durability.
- HDT of 55 °C and up to 90 °C when annealed.
- Halogen-free.

Suitable applications

- Manufacturing electronic components.
- Automotive applications.
- 3D printing flame resistant end-use parts.
- Making (electrical) toys.
- Household applications that require fire safety.

Recommended print settings

Nozzle temp: 210 - 240°C

Print speed: 25 - 150 mm/s

Drying: Not necessary

Experience level: Beginner

Heat bed: 40 - 60°C

Nozzle: ≥ 0.15mm

Drybox: Not necessary

Fan speed: 75 - 100%

Buildplate adhesion: EasyFix Nr. I

Enclosure: Not necessary

Material properties

Specific Gravity

Typical value

1.26 g/cm³

Test Method

ASTM D 792

Melt Flow Index (210°C, 2.16kg)

10 g/10min

ISO 1133

Mechanical properties

Tensile strength at yield

36.6 MPa

ISO 527

Tensile strain at break

9.9%

ISO 527

Young's Modulus (23 °C)

2.57 GPa

ISO 527

Izod Notched Impact Strength (23°C)

5.03 kJ/m²

ISO 180

Thermal properties

HDT

55°C

ISO 75-2/B

HDT annealed at 95°C

90°C

ISO 75-2/B

Melt Temperature

75°C

DSC

Flammability properties

Fire Resistance (0.8mm)

V0

UL94V

Fire Resistance (3.2mm)

V0

UL94V

Buildplate adhesion

For optimal buildplate adhesion we recommend to use our EasyFix Adhesive – Nr. I.

Storage and handling

Filament should be stored at room temperature in a dry and dark place with humidity below 15%.

Recommended storage temperature is ca. 18-25°C (64.4 -77.0°F). Keep out of moisture, sunlight and direct

heat. When stored properly, product has a shelf life of 24 months. To obtain the best parameters of the printed object, it is recommended to dry the material prior to usage and to 3D print it directly from a dry box.



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Product export information

| HS Code | Description | Origin |
|----------|------------------------------|----------------|
| 39169090 | Monofilament for 3D printing | European Union |

Disclaimer

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