

PLA-PRO

PLA-PRO is our industrial high performance PLA which features extreme performance on speed¹, mechanical properties² and high heat environments³. PLA-PRO is perfect for printing speeds of > 120mm/s, allowing you to be more efficient in the same time. Users who use a lot of ABS now have a bio-based alternative material with all the advantages of ABS and none of the disadvantages like shrinking and delamination. Due to the composition of PLA-PRO the material is already highly crystalline after printing, which increases the stiffness of the material at higher temperatures. When you combine this with annealing the PLA-PRO the material reaches an HDT of 95°C+. Compared to other high temp. resistant PLA types PLA-PRO has the USP of negligible small shrinkage after annealing (the dimensional accuracy is superb). PLA-PRO has been specifically engineered for industrial applications where you want an easy to print filament with high mechanical properties. Objects that are printed with PLA-PRO will have a semi matte finish which not only looks great but helps concealing layer lines.

Material features:

- Prints like PLA, performs like ABS
- Engineered for fast printing (> 120mm/s)
- ABS matching mechanical properties
- Great heat resistance at higher temperatures
- HDT after annealing 95°C+
- Semi matte finish after printing
- Negligible shrinkage after annealing

Filament specs.

Size	Ø tolerance	Roundness
1,75mm	± 0,05mm	≥ 95%

Material properties

Description	Testmethod	Typical value
Specific gravity	ISO 1183	1,27g/cc
MFI 210°C / 2,16kg	ISO 1133	6 g/10 min*
Tensile strength	ISO 527	40 MPa
Elongation at break	ISO 527	47%
Tensile modulus	ISO 527	4000 MPa
Impact strength – Charpy notched 23°C	ISO 179	23 kJ/m2
Printing temp.	DF	230±10°C based on speed
Melting temp.		205±15°C
Heat Deflection temp. (B) (after annealing)	ISO 75	95°C+**

Additional info:

PLA-PRO can be printed without a heated bed. If you have a heated bed the recommended temperature is ± 50-60°C. PLA-PRO adheres to any print surface though we always recommend some adhesive or a print sticker.

PLA-PRO can be used on most common desktop FDM or FFF technology 3D printers.

Storage: Cool and dry (15-25°C) and away from UV light. This enhances the shelf life significantly.

***Viscosity is lower (higher MFI) at a higher printing temperature (240°C ± 10°C), which increases the printing speed capabilities.**

****These results are preliminary and are based on several tests made in-house by Dutch Filaments.**

Current values should be considered factual (± 10%). We will update the technical datasheet as testing progresses (or finishes).