



Technical Data Sheet

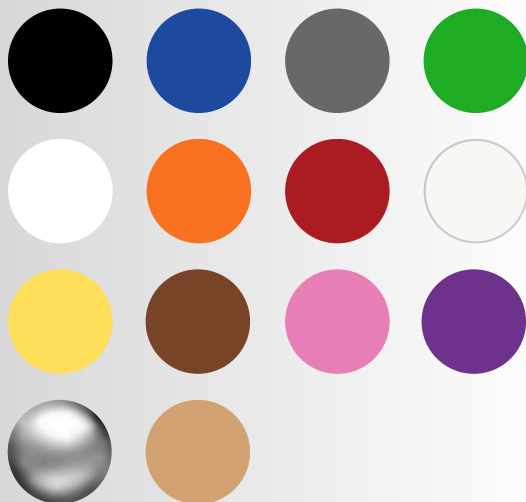
PLA+

Product overview

Professional Lab PLA+ is a durable, plant-based 3D printing filament engineered for strong, accurate, and user-friendly results across a wide range of applications.

Produced from renewable natural resources, PLA+ combines eco-conscious sourcing with enhanced mechanical properties for more resilient prints. Thanks to its stable dimensional accuracy, low warping, and broad extrusion range of 190–220°C, it is suitable for both professionals and beginners. The filament delivers smooth surfaces and crisp details, making it perfect for prototypes, decorative models, functional parts, and artistic prints.

Available colors



Product features

Reliable thermal performance: Professional Lab PLA+ prints reliably within a consistent temperature range of 190–220°C, making it suitable for a wide array of 3D printing conditions and setup.

Versatile processing adaptability: the filament is optimized for FDM printing but adapts well to various settings, ensuring stable extrusion and layer adhesion even during long print jobs.

Balanced mechanical properties: PLA+ offers enhanced toughness and strength compared to standard PLA, making it well-suited for visual models, functional prototypes, and general-purpose parts with moderate load demands.

Additional material qualities: with a clean surface finish, moderate gloss, and good shape retention, Professional Lab PLA+ delivers aesthetic and functional reliability. The filament is non-toxic and derived from renewable sources, supporting low-emission, eco-conscious production.

Printing Recommendations

- Nozzle temperature: 190 – 220°C
- Build surface material: PEI, glass
- Build surface treatment: glue
- Build plate temperature: 25– 60°C
- Cooling fan: turned on
- Printing speed: 30 – 70 mm/s
- Raft separation distance: 0.2 mm
- Retraction distance: 7 mm
- Retraction speed: 20 mm/s
- Threshold overhang angle: 60°

Based on a 0.4 mm nozzle. Printing conditions may vary with different nozzle diameters.

Drying recommendations

To ensure optimal printing performance and surface quality, it is recommended to dry PLA+ Professional Lab filament before use, especially if it has been exposed to ambient humidity. PLA is hygroscopic and can absorb moisture from the air, which may lead to issues such as stringing, bubbling, poor layer adhesion, or inconsistent extrusion.

Use a filament dryer or a convection oven with precise temperature control. Avoid using open heat sources or high temperatures that could deform the filament spool.

After drying, store the filament in a sealed container with desiccant to prevent moisture reabsorption. Regular drying is particularly important in humid environments or when using partially used spools.

Precautions

Protect from high temperatures:

PLA+ maintains dimensional stability during printing but may soften or deform if exposed to temperatures above ~60°C. Keep both filament spools and finished prints away from heat sources such as radiators, enclosed hot spaces, or direct sunlight.

Store in dry conditions:

As a hygroscopic material, PLA+ can absorb moisture from the air, leading to stringing, inconsistent extrusion, or poor surface finish. Always store the filament in a sealed, moisture-proof container with desiccant when not in use.

Print in a ventilated area:

While PLA+ is low-emission and generally safe, continuous printing may still release fine particles or mild odors. For safe and comfortable operation, ensure your workspace is well-ventilated.

Follow optimized print settings:

To achieve the best results with PLA+, use the manufacturer's recommended temperature, speed, and retraction values. Avoid abrupt changes in settings—adjust gradually when tuning for specific printers or models to prevent clogging or print defects.

Disclaimer of Liability

The typical values provided in this datasheet are for reference and comparison only. They should not be used as design specifications or for quality control. Actual values may vary depending on print conditions. The performance of printed parts depends not only on the material but also on design, environment, and print parameters.

Each user is responsible for evaluating the safety, legal compliance, technical suitability, and recycling/disposal of Professional Lab materials for their intended application. Professional Lab makes no warranty of any kind, unless stated otherwise, regarding the suitability for any specific use or application. Professional Lab is not liable for any damage, injury, or loss resulting from the use of materials. **The guidelines given in the card are indicative, always use the parameters given directly on the spool.**

