

## Print Recommendations for Filament PM ABS-T

ABS-T is a stronger and harder variant of ABS with higher heat resistance and a characteristic glossy surface (the raw material is transparent thanks to the MMA additive). It suits smaller cosmetic and heat-loaded parts – design covers, mounts, and elements that don't see much bending load. It prints similarly to ABS: it needs an enclosed chamber and dry filament. With a dialed-in profile you get strong, heat-stable, and visually clean prints.

### What to expect from this profile – and what not to

**This is not a universal profile for every geometry.** It's a starting point tuned for specific hardware (see below). Each part needs to be assessed for whether ABS-T is a good fit, and settings should be adjusted for its particular geometry.

**Expect:** higher tensile strength than regular ABS (48 vs 42 MPa), higher heat resistance (HDT approx. 94–97 °C), a glossy surface, and good dimensional stability on smaller parts.

**Don't expect toughness.** ABS-T has low elongation at break (12% versus 30% for regular ABS) – it's stiff and more brittle, and it cracks under bending or impact. **For parts subject to bending or impact loads, choose standard ABS or PC/ABS instead.**

### ! Golden rules for successful ABS-T printing !

Before you start printing, go through these rules. They determine whether you end up with a strong, functional part or one with delamination and cracked walls.

1. **Drying.** ABS-T absorbs moisture from the air. Wet filament means bubbles, spitting, loss of gloss, and reduced strength. Dry it at 70 °C for 4–6 hours before printing, and run long prints straight from a dry box.
2. **Enclosed, preheated chamber.** ABS-T warps – an enclosed chamber is essential. On the Bambu Lab P1S (passive chamber), let the bed preheat with the door closed for about 15–30 minutes before printing. The Prusa Core One waits for chamber preheat on its own (it waits until the chamber reaches a minimum temperature).
3. **Adhesion: bonding aid.** ABS-T has weaker bed adhesion than regular ABS. Use 3DLAC or Magigoo. For larger parts, enable a 5–10 mm brim. If the part lifts off, degrease the plate with IPA before applying the adhesive.
4. **Minimal part cooling.** Strong part cooling on ABS-T breaks layer cohesion and causes delamination and brittleness. Keep cooling as low as possible; for strength-critical parts use the minimum, with only steep overhangs allowed a bit more. **AUX (side) fan always at 0%.**
5. **Material choice.** ABS-T is not a material for bending or impact. If a part cracks under bending, that's not a settings problem but the wrong material choice – reach for a tougher ABS or a stronger PC/ABS instead.

### Key print parameters

The table summarizes the basic parameters shared by both profiles. You'll find exact speeds, cooling, and flow directly in the downloaded profile – we keep refining them based on practical experience, so the current values always live in the profile itself.

| Parameter          | Value  |
|--------------------|--------|
| Nozzle temperature | 250 °C |
| Bed temperature    | 100 °C |

|                 |                          |
|-----------------|--------------------------|
| Filament drying | 70 °C / 4–6 h            |
| Chamber         | enclosed, preheated      |
| Adhesive        | 3DLAC / Magigoo          |
| Brim            | 5–10 mm for larger parts |
| Part cooling    | minimal                  |
| AUX fan         | 0%                       |

### Every part deserves a bit of fine-tuning

The profile is a reliable starting point, not dogma. For a specific part you may need to adjust some parameters:

- **Large flat parts:** increase the brim, extend chamber preheat time, consider slowing down outer wall speed.
- **Small detailed parts:** slow down outer wall speed for a better surface and finer detail.
- **Parts with overhangs:** you can temporarily increase cooling a bit for this print; in the standard profile we keep it low.
- **Dimensional accuracy:** print a 20×20×20 mm calibration cube, measure it, and adjust the shrinkage compensation.

For production runs, always print and verify a single piece first before starting the full run.

### Summary

ABS-T is a strong, hard, heat-resistant, and glossy material for smaller cosmetic and heat-loaded parts – not for parts subject to bending or impact loads. Follow these five principles and you'll get reliable prints from it:

- **Dry filament** (70 °C / 4–6 h).
- **Enclosed, preheated chamber** before starting the print.
- **Bonding aid** on textured PEI, plus a brim for larger parts.
- **Minimal part cooling, AUX fan at 0%.**
- **Correct material choice** – for bending or impact loads, choose ABS or PC/ABS.

**One last tip:** every profile is a living document. If you find a better combination of parameters for your application, let us know – we're happy to keep improving the profiles.