# Can you dry filament for too long?

Asked 3D Content Team
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**Abstract.** Mostly no: at the maker's temperature, no maker names harm from extra hours for PLA or PETG. Heat above it fuses coils; nylon and PC can turn brittle.

**Keywords:** pla, petg, nylon

**Table 1.** The number

| Maker | On long drying | On repeated drying | Ceiling it gives |
|---|---|---|---|
| Prusa | Keep to the listed times "to prevent overdrying," with no word on what overdrying does | Dry polyamide and other highly hygroscopic filaments "before every print" unless stored dry | PLA 45 °C, PETG 55 °C, nylon "below 90 °C"; hotter, filament will "soften and stick together" |
| Bambu Lab | No time limit; its AMS 2 Pro runs PLA for 12 h at 45 °C | PC "may become brittle after repeated 'heating-cooling' drying cycles"; printed parts unaffected | Oven: PLA 50 °C, PETG 60 to 65 °C, nylon composites 75 to 85 °C; PLA and PETG spools rated 70 °C |
| Polymaker | Follow the listed times and temperatures "to avoid damaging or deforming it"; nylon stays in a dryer for the whole print | Nylon and PETG "often" need a dryer even while printing | PolyLite PLA 55 °C, PolyLite PETG 65 °C, PolyMide CoPA nylon 100 °C |
| 3DXTech | Over-dried nylon "will be brittle and more difficult to process"; saturated nylon "may take 24+ hours" | Not addressed | PLA 65 °C, PETG 65 °C, nylon 90 °C; going over risks "deformation of the filament, reel, or both" |

## 1 Can you dry filament for too long?

Mostly no, at the maker's temperature, such as Prusa's 45 °C for PLA. No maker names harm from extra hours alone for PLA or PETG, though Prusa says to keep to its times "to prevent overdrying." The exceptions are over-dried nylon and repeatedly dried polycarbonate (PC), which turn brittle. Excess heat fuses coils and warps spools.

### 1.1 The number

Prusa's row comes from its Drying filament and Polyamide (Nylon) articles, Bambu Lab's from its Filament Drying Recommendations wiki and its PLA Basic and PETG Basic data sheets. Polymaker's comes from its Wet Filament and PA wiki pages and its PolyLite PLA, PolyLite PETG and PolyMide CoPA data sheets, and 3DXTech's from its drying chart.

### 1.2 Why

Drying only pulls water out, so extra hours at a safe temperature cost you time and little else. Heat does the damage. Near its glass transition a plastic softens, and coils that sit still stick together. That's why Bambu Lab keeps PLA (polylactic acid) out of its dryers' static mode.

Prusa warns that home ovens swing in temperature. In its words, "even if left for less time than recommended, high temperatures will damage the filament."

### 1.3 Can you dry PLA too long?

Not at 45 to 55 °C. Bambu Lab's AMS 2 Pro runs PLA for 12 hours at 45 °C, double Prusa's 6 hours at the same setting. The risk is heat. Glass transition is 60 °C for Bambu PLA Basic and 61 °C for Polymaker PolyLite PLA, and Prusa says oven swings hurt "especially low-temperature ones like PLA." 3DXTech's 65 °C maximum sits above both, so go by your own spool's data sheet.

### 1.4 Can you dry PETG too long?

Not at its listed temperature. For PETG (glycol-modified polyethylene terephthalate), Bambu Lab runs 65 °C for 12 hours in the AMS 2 Pro. Its PETG Basic reaches glass transition at 69 °C, on a spool rated to 70 °C, so a dryer that runs 4 °C hot puts the filament at its softening point. Grades differ: Polymaker's PolyLite PETG lists 81 °C.

### 1.5 Can you over-dry nylon filament?

One maker says yes. 3DXTech writes that nylon "actually likes a little bit of moisture in it or it will be brittle." The others worry about the opposite: Polymaker keeps nylon in a dryer for the whole print, and Bambu Lab says nylon left in open air for about 3 months becomes very hard to dry at 80 to 90 °C.

Dry nylon prints are stiffer but less tough. Polymaker's PolyMide CoPA data sheet puts notched Charpy impact strength, a measure of toughness, at 6.9 kJ/m² dry and 27.7 kJ/m² at 6.16 percent moisture. Tensile strength falls from 78.0 to 34.3 MPa over the same change. Prints take that moisture back from room air.

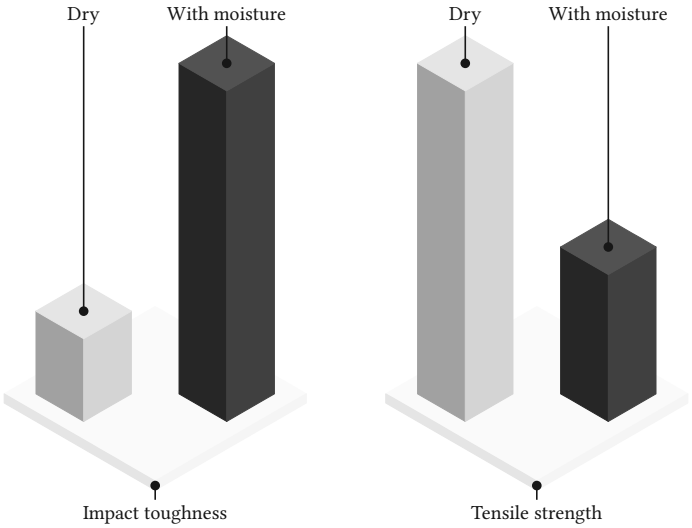



**Figure 1.** On Polymaker's PolyMide CoPA data sheet, the nylon holding moisture is about four times tougher in a notched impact test but less than half as strong in tension; each pair is drawn to its own scale.

No maker here says drying at its listed temperature yellows nylon. Hot air does attack it over long exposure. Deshoulles and colleagues aged PA6 (nylon 6) film in 100 to 140 °C air in a study lasting up to two years. Its chains broke and the film turned brittle.

### 1.6 Can filament be too dry?

Only in narrow cases. Bambu Lab says "a very dry or old filament can quickly become very brittle" and can snap in the AMS. Polymaker says long vacuum-sealed storage can dehydrate the outer winding, and it suggests removing the outer 50 g.

Yet Polymaker's first fix for snapping is drying, and Bambu blames toolhead breaks on filament "not dry enough." No maker gives a dryness limit for PLA or PETG. The wet filament page covers what else makes filament break.

### 1.7 Can you dry filament multiple times?

Yes, except PC. Prusa says to dry polyamide and other highly hygroscopic (water-absorbing) filaments before every print unless they're stored dry. Bambu Lab says repeated heat-and-cool cycles make PC filament brittle enough to snap mid-print, though printed parts keep their strength. Its fix is sealing a dried PC spool with desiccant so the next drying can be short or skipped.

### 1.8 How to check it on your own print

- **Use your spool's own number.** The PLA ceilings above span 45 to 65 °C.
- **Measure the dryer.** Prusa wants an external thermometer in any oven; put it beside the spool.
- **Check the spool rating.** Prusament's current black spool takes 90 °C; the old black one loosens above 45 °C unless a screw holds its sides.
- **Look at the coils.** Tacky or fused coils mean it ran too hot, so lower the temperature next time.
- **Bend the end of an old spool.** If a long-sealed spool snaps, cut off the outer 50 g, as Polymaker suggests. If PC snaps after several dryings, keep it sealed between prints instead of re-drying it each time.
- **Seal it straight after.** Bambu Lab says freshly dried filament at about 55 percent RH (relative humidity) can absorb enough water to hurt prints within 2 to 12 hours. Below 20 percent RH it stays dry for 2 to 7 days.
- **If nylon parts are too brittle,** moisture-condition them: Polymaker uses 48 hours in a box with a wet sponge, or 2 weeks in room air.

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