

Filament & plate compatibility and parameter settings

Information about the compatibility and the printing setting for different materials.

Bambu Lab printers are really fast. In order to meet more diverse printing needs, and ensure good printing quality and experience, we provide nozzles of different specifications and printing surfaces of different materials.

To ensure successful prints with good results, we have prepared some recommendations for how the filament can be used in conjunction with various nozzles and printing surfaces.

Compatibility of nozzle and AMS

Please refer to the table below to set the printer parameters according to the filament and nozzle type.

Please note that AMS does not support filaments that are too soft, too brittle, or too hard and rough. Too soft filaments, such as TPU 95A, TPU 85A, TPU 83A, and TPU 80A, are difficult to pass through the AMS feeding tube, which may lead to feeding failure and blockage. Too brittle filaments like some brands of PET-CF, PLA Wood, PA-CF/GF, PAHT-CF/GF, etc., are easy to break in the AMS PTFE tube. Too hard and rough filament like some brands of PET-CF, PA-CF/GF, PAHT-CF/GF, PLA-CF/GF, etc., which are easy to wear the AMS feeding funnel.

Material	0.2 mm Nozzle	0.4 mm Nozzle	0.6 mm Nozzle	0.8 mm Nozzle	Hardened Nozzle Required?	Nozzle Temperature (± 10 °C)	Compatible with AMS?
PLA	YES	YES	YES	YES	NO	190 - 240°C	YES
Wood / Rock / Metal-filled PLA	NO	YES	YES	YES	YES for Metal-filled PLA	190 - 240°C	YES
PLA-CF/GF	NO	Recommended for Bambu PLA-CF	YES	YES	YES	210 - 240 °C	YES for Bambu PLA-CF

PVA	YES	YES	YES	YES	NO	190 - 240 °C	YES
PETG	Not recommended	YES	YES	YES	NO	240 - 270 °C	YES
PETG-CF	NO	Recommended for Bambu PETG-CF	YES	YES	YES	240 - 270 °C	YES
ABS	YES	YES	YES	YES	NO	240 - 280 °C	YES
ASA	YES	YES	YES	YES	NO	240 - 280 °C	YES
PC	Not recommended	YES	YES	YES	NO	260 - 290 °C	YES
PA	NO	YES	YES	YES	NO	260 - 290 °C	YES
PA-CF/GF PAHT-CF/GF	NO	YES	Highly recommended	YES	YES	260 - 300 °C	YES for Bambu PA-CF, PAHT-CF
PET-CF/GF	NO	YES	Highly recommended	YES	YES	260 - 300 °C	NO
TPU	Not recommended	YES	YES	YES	NO	200 - 250 °C	NO

Heatbed settings

We recommend that you apply solid or liquid glue to the build plate so that in addition to better bonding the model and making the model easier to remove. It also provides better protection to the surface of the build plate, especially when using the Bambu engineering plate. The following are recommended heat bed temperatures different filaments and glues:

Material	Glue Stick	Liquid Glue
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PLA / PLA-CF	35 - 65 °C	35 - 65 °C
PETG / PETG-CF	60 - 80 °C	60 - 80 °C
ABS	90 - 100 °C	90 - 100 °C
ASA	90 - 100 °C	90 - 100 °C
TPU	30 - 45 °C	30 - 45 °C
PET-CF/GF	80 - 100 °C	80 - 100 °C
PC	100 - 120 °C	Not Recommended
PA / PA-CF/GF / PAHT-CF/GF	90 - 110 °C	Not Recommended

The **glassy transition temperature** describes the transition from glassy to rubber:

When printing a filament whose glass transition temperature is lower than 60 ° C (such as PLA, PVA, or TPU) and the head bed temperature is set higher than 45 ° C, **it is recommended to open the front door and remove the top glass cover** to avoid material softening caused by thermal creep and abnormal extrusion or clog of the filament.

When printing a filament (such as PETG) with a glass transition temperature of 60-80 ° C and the heat bed temperature is set higher than 60 ° C, **it is recommended to remove the top glass cover** to avoid material softening due to thermal creep, resulting in abnormal extrusion or clog of the filament.

Regularly cleaning the surface of the build plate with dish soap and hot water will remove dust or grease residue that causes poor adhesion.

Do not clean the surface of the construction board with Acetone, as it may cause surface damage.

After printing, **be sure to wait a few minutes until the build plate and model have cooled before removing the model.** This will make it easier to remove the model and avoid damaging the surface of the plate and the bottom of the model.

Material	Bambu Cool Plate	Bambu Engineering Plate	Bambu High-Temperature Plate	Bambu Dual-Sided Textured PEI Plate	Upper Glass Cover Plate Removal?
PLA	35 - 45 °C	Not recommended	45 - 65 °C	45 - 65 °C	If bed > 45 °C, Recommended
Wood / Rock / Metal-filled PLA	35 - 45 °C	Not recommended	45 - 65 °C	45 - 65 °C	If bed > 45 °C, Recommended
PLA-CF	45 - 65 °C	Not recommended	45 - 65 °C	45 - 65 °C	If bed > 45 °C, Recommended
PVA	35 - 45 °C	Not recommended	45 - 65 °C	45 - 65 °C	If bed > 45 °C, Recommended
PETG	Not recommended	60 - 80 °C	60 - 80 °C	60 - 80 °C	If bed > 70 °C, Recommended
PETG-CF	Not recommended	60 - 80 °C	60 - 80 °C	60 - 80 °C	If bed > 70 °C, Recommended
ABS	Not recommended	90 - 100 °C	90 - 100 °C	90 - 100 °C	NO
ASA	Not recommended	90 - 100 °C	90 - 100 °C	90 - 100 °C	NO
PC	Not recommended	90 - 110 °C	90 - 110 °C	90 - 110 °C	NO
PA	Not recommended	100 - 120 °C	100 - 120 °C	100 - 120 °C	NO
PA-CF/GF PAHT-CF/GF	Not recommended	100 - 120 °C	100 - 120 °C	100 - 120 °C	NO

PET-CF/GF	Not recommended	80 - 120 °C	100 - 120 °C	100 - 120 °C	NO
TPU	Not recommended	30 - 35 °C	35 - 45 °C	35 - 45 °C	If bed > 45 °C, Recommended

Supplementary note:

1. The matchings between the materials and the heat bed plates are selected based on the characteristics of each material and the plate, but the user can choose the printing combination independently;
2. In Bambu Studio, if the temperature of a heatbed in the material preset is set to 0 °C, the software will prompt that the material is incompatible with slicing. Only when the bed temperature is manually changed to the desired setting (a non-zero value), will the prompt disappear, and the slicing operation will be performed according to the setting.
3. Variations in the color and luster of the Engineering Plate appearance and the deletion of exposed metal areas are just minor adjustments to optimize the production process and surface quality. If the coating remains on the nozzle when it is wiped, it will be heated and melted before printing the model and squeezed out. Such changes do not affect leveling, Lidar, adhesion, or range of use. You can purchase with confidence!
4. The parameter settings for the Bambu Dual-Sided Textured PEI Plate apply to the **Golden Bambu Dual-Sided Textured PEI Plate** and the **Black Bambu Dual-Sided Textured PEI Plate**.

Storage and Features

The state of the filaments you use has a crucial impact on the printing quality, especially for some materials requiring better storage conditions.

In addition, knowing more about some material features can also help you choose suitable printing materials according to your application.

Material	Moisture Proof Requirements?	Drying Requirements	Heat Deflection Temperature Level	Impact Resistance	Tensile Strength
PLA	No	55 °C for 8 h	★ ★	★ ★	★ ★ ★

Wood/Rock/Metal-filled PLA	No	55 °C for 8 h	★ ★	★ ★	★ ★ ★
PLA-CF	No	55 °C for 8 h	★ ★	★ ★	★ ★ ★ ★
PVA	Yes	55 °C for 8 h	★	★	★
PETG	No	70 °C for 8 h	★ ★ ★	★ ★ ★	★ ★
PETG	No	70 °C for 8 h	★ ★ ★	★ ★ ★	★ ★ ★
ABS	No	80 °C for 8 h	★ ★ ★	★ ★ ★	★ ★ ★
ASA	No	80 °C for 8 h	★ ★ ★	★ ★ ★	★ ★ ★
PC	No	80 °C for 8 h	★ ★ ★ ★	★ ★ ★ ★	★ ★ ★ ★
PA	Yes	80 °C for 8 - 12 h	★ ★ ★ ★	★ ★ ★	★ ★ ★ ★
PA-CF/GF PAHT-CF/GF	Yes	80 °C for 8 - 12 h	★ ★ ★ ★ ★	★ ★	★ ★ ★ ★ ★
PET-CF/GF	Yes	80 °C for 8 - 12 h	★ ★ ★ ★ ★	★	★ ★ ★ ★ ★
TPU	Yes	70 °C for 8 h	★	★ ★ ★ ★ ★	★

It's important to choose the right type of filament according to the application. For example, PLA is not recommended to be used for printing a model that will be used in a higher-temperature environment, as it can start to slowly degrade and soften. PETG and ABS/ASA might be better filaments for higher-temperature applications.

We recommend learning more about each type of filament and what are the best applications for each of them, to ensure a successful result.