

PETG on Wham Bam PEX on the Bambu X1, or P1P Printers

PETG likes to bond with both PEI and PEX.

Bambu raises the temperatures of the hot end in their slicer so they can push more plastic through the hot end and print at incredible speeds. While this works well for many filaments on different surfaces, it can be a problem for use with the Wham Bam PEX surface and PEI sheets, but have no worries, here are best practices too getting amazing results.

(Please note that at time of writing Bambu still doesn't offer PETG filaments, probably for this very reason)

Wham Bam build surfaces are considered consumables (like tires on a car) as there is no way to foresee how each user will print with it, nor for Wham Bam to know each manufacturer's filament composition, but with some care you should be able to print successfully for years.

Quick Summary:

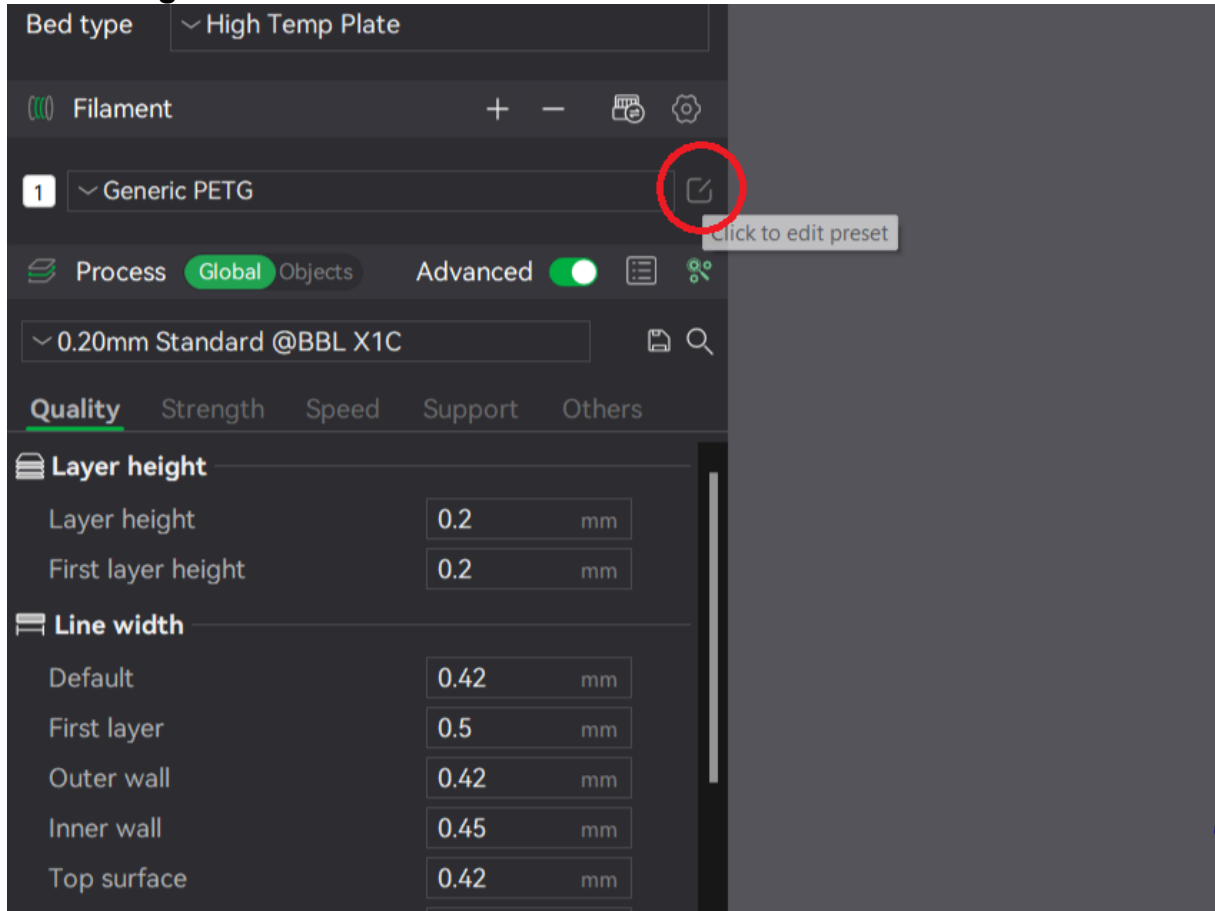
- In slicer lower your hot end settings to a maximum of 250° and your bed to 50°C.
- Increase gap of first layer print.
- Allow your flexi plate and your part to fully cool before removing
- Always flex to remove, never pry or force off.
- If a certain filament is really adhering you can and should use some glue stick as a barrier layer, this can wash off with soap and water after.
- Print a test cube in a corner for each PETG filament roll before printing full prints.
- Feel free to write to us at technical@whambamsystems.com for more advice or if you did damage your PEX so we can help you.

Instructions for modifying PETG profile in BambuLab Studio Slicer for Wham Bam PEX Plate

- Ensure the X1/C firmware and the BambuLab Studio Slicer are updated to the latest versions.
- Launch the BambuLab Studio Slicer.
- In the Filament selection section, choose "Generic PETG"
- Click on the icon circled in **RED** to edit the preset.
- **(See Image A)**

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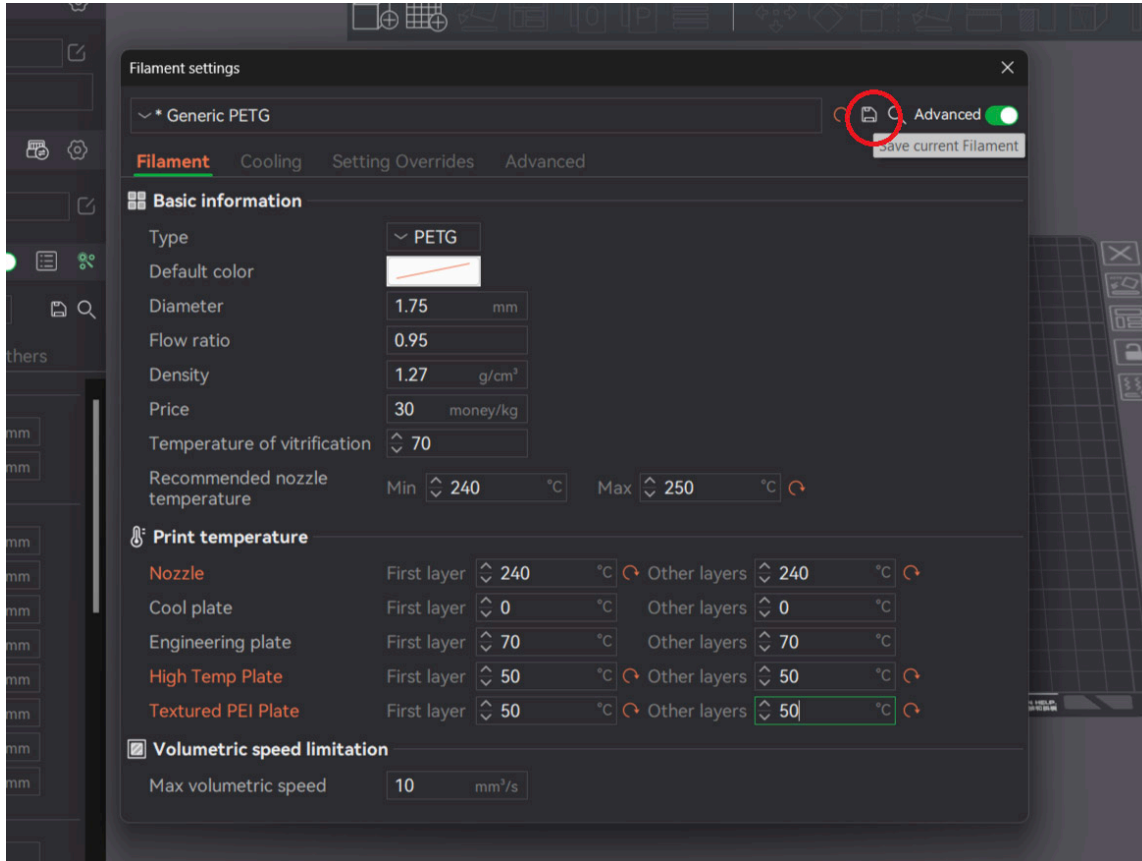
- **Image A**



- Change the Max value of "Recommended nozzle temperature" to 250°C
- Change the First layer & Other layers value of "Nozzle" to 250°C (or the recommended temperature set by the filament manufacturer)
- Change the First layer & Other layers value of "High Temp Plate" to 50°C
- Change the First layer & Other layers value of "Textured PEI Plate" to 50°C
- Once the new values are updated. Click the SAVE icon circled in **RED**
- **(See Image B)**

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- **Image B**

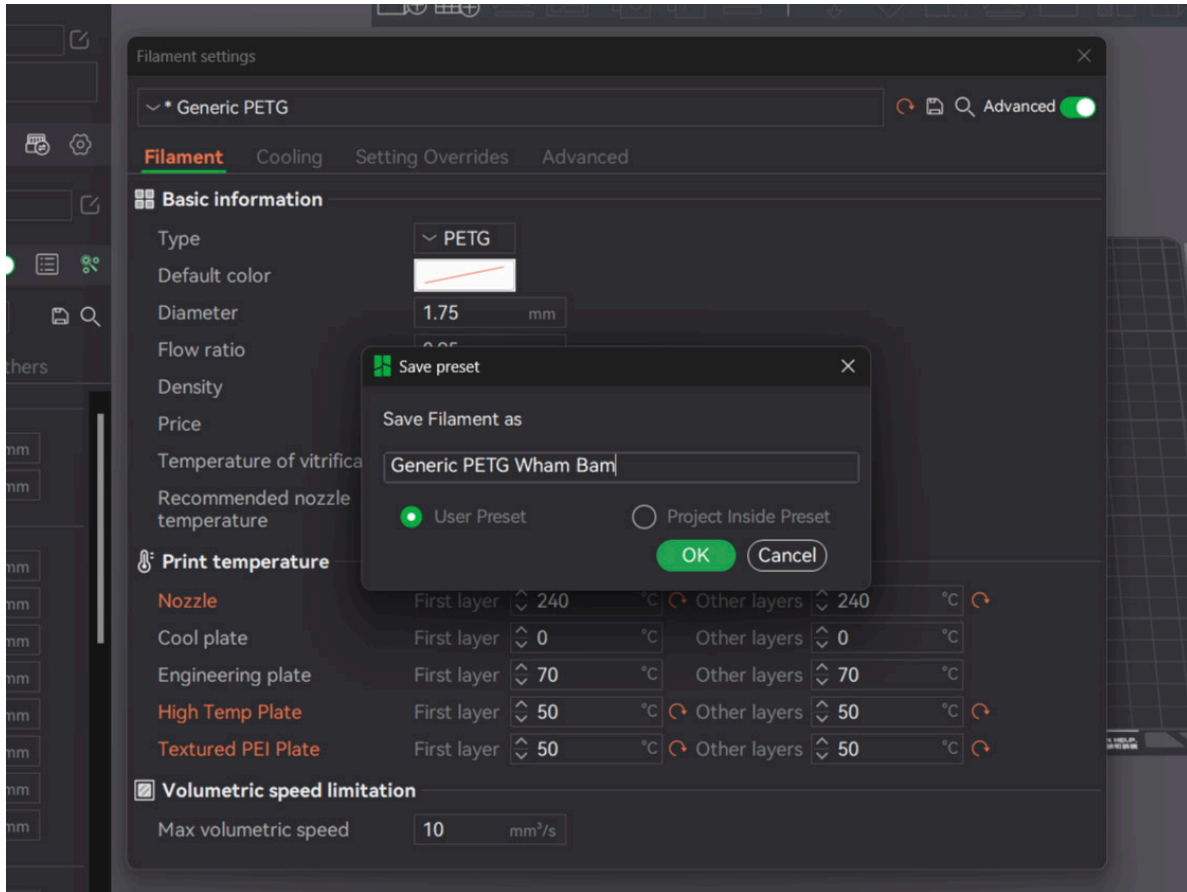


- A Save preset Dialog box will appear
- Change the name of your new PETG preset to "Generic PETG Wham Bam"
- Click OK
- You have now updated and saved the temperature settings of PETG for Wham Bam plate.
- You can select this saved profile for future use when printing PETG on Wham Bam Plate.
- **(See Image C)**

note we recommend that you print with High Temp Plate when using Wham Bam PEX

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- **Image C**



Increase gap of first layer:

To increase your gap of your first layer go here and get the start gcode:
<https://www.printables.com/model/322000-bambu-lab-modified-start-and-end-gcode>

Users need to:

Ensure that their X1/C is updated with the latest firmware

Ensure they are using the latest Bambu Slicer

Follow the instruction on how to copy paste the start gcode on the Printables link

Choose "High Temp Plate" in the build plate section

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In Depth Understanding:

PETG tends to be difficult for build surfaces, it really grips to PEI and PEX because of its molecular similarity.

With PEX and PETG, it is usually not a single factor, but rather, a few combinations (like nozzle too close and too hot of temps) which make the part bond too well to the surface and risk chipping. Below we list those in order so you can try to dial in your machine.

On top of that many manufacturers add a variety of different additives to their filaments to improve performance or aesthetics, and these can have a big impact on binding as well. We have even verified with one manufacturer that all of their PETG prints well without bonding, but one single color bonded too well, and they told us for that color they had to use a specific additive.

1. We suggest always testing every PETG filament roll before printing a full plate. You can do this by simply printing a small cube in one of your corners of your build plate using the temperatures and settings listed below.

If you get too much bonding, use glue stick or further tune your machine.

2. The most important is never to remove part while Flexi Plate AND the Part are still warm. To speed up cooldown process, take the Flexi Plate off your machine with part still on it, and prop it up to allow it to cool from under and above. High mass parts can contain a lot of heat in the plastic at the base.

3. Never pry. After the part and plate are cool, flex your Flexi Plate to pop the part off, if it still sticks flex in another direction. Don't force your parts off, or they can rip up pieces of PEX.

4. Make sure the nozzle is not too close to the bed, you don't need much first layer squish, maybe the first layer should be 80% of the height of your extruded filament, you don't need to smear it onto the base like you do with PLA on PEX.

5. Keep temperatures at the lower end of good quality. A 50°C bed is perfect and the hot end should be between 240-250 depending on the filament. You don't want to overheat the PETG if it is not necessary, just get it to point at which it creates strong bonds between layers.

6. If you still have sticking after adjusting settings and gap, you may want to try a glue stick as a barrier layer, it can easily wash off with soap and water after use.

Thank you very much to Shannon Heng for the immense help in creating this guide and codes!

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