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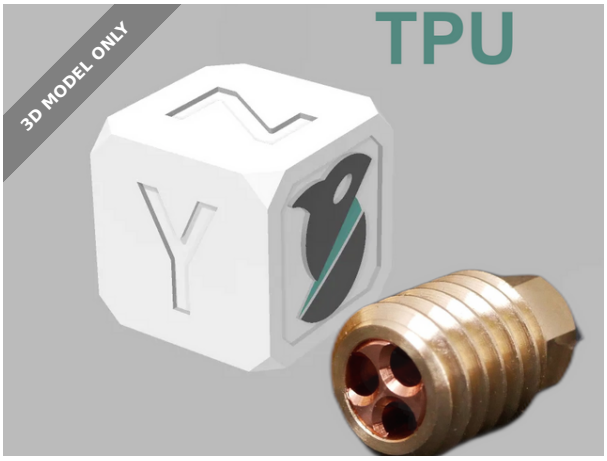


# *CHTNozzle/TPU* Tuned X1C Print Profiles for Bambu/ Orca-Slicer

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VIEW IN BROWSER

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## Summary

TPU is really tricky to tune. Save yourself the frustration and learn from my mistakes.

3D Printers > Bambu Lab Parts & Upgrades

Tags: x1 bambu bambulab bambulabx1carbon x1c p1p p1s

**Important note:** This collection is for **brass CHT-Style nozzle (0.4 mm)** with the Bambu printers.. NOT the stock ones. These CHT-style nozzles allow for higher flow/faster printing than the stock hotend is able to achieve. If you want one, you'll need to buy a kit from aliexpress or some local retailer. Note that these are NOT official BondTech CHT nozzles, but a chinese clone for the X1/P1P. I'd buy official ones if I could to support BondTech, but they haven't made anything available. I've included a picture of the nozzle as part of the image so nobody gets confused.

Change log:

- Added **Overture Digital Blue TPU** (7/30/23). VFR = 6.5 (up from 3.75 in normal nozzle)
    - This needed a lot of tuning to produce good test Eevee prints.

- Added **Overture Clear HighSpeed-TPU** (8/4/23). VFR= 12 mm^3/sec. Do not confuse this with regular Overture TPU!
- Added **Ninjatek Cheetah Grey TPU** (8/7/23). VFR= 6.2 mm^3/sec.
- Added **Inland White TPU** (8/7/23). VFR= 5 mm^3/sec.
- Added **Bambu Black HF TPU** (5/27/24). VFR= 12 mm^3/sec.

**What this is:**

This is a collection of all of my TPU filament profiles for all filaments I've used of this type. I happen to have a decent amount of California Filaments because I've found that brand works well with this printer, and you can push the flow rates higher with it than some others.

I will update it as I tune new filament brands and colors. They are generally tuned for **flow rate**, **pressure advance**, and **temperature** and **volumetric flow limits** and **overrides**. They're a good working starting point for anyone struggling with a filament. I've also tuned other types of filaments (see my models here) and you should find, by category:

**Standard Nozzle** (0.4 mm , Hardened Steel, should work for P1P/P1S as well)

- TPU / Flexibles
- Nylon/PA and PACF variants
- Polycarbonate & Polycarbonate-CF
- PLA / PLA + / Silk PLA
- ABS / ASA

**CHT-Nozzle** (0.4 mm , Brass)

- PLA
- PETG
- ASA

**How to use:**

These 3MF files are designed for use in Orcaslicer/Bambuslicer, but will work best in Orcaslicer, because it supports using a fixed pressure-advance value in the slicer.

- Load the 3MF file for the filament of your choosing. Files are named as **<Brand>_<Color>_<Type>.3mf**.
- (optional, recommended): Save the filament and/or print presets for your own use to your user presets for future use.
- Remove the calibration cube dummy object and put your desired object in.

- **Print! But, turn off flow calibration option in your prints!** The more reliable PA value stored in the filament profile will be used instead, and you can skip the wasted startup time, too!
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- If you want to use these in Bambu slicer, you won't get the PA values applied automatically sadly, and you'll have to do that with a manual GCODE in the filament's start GCODE. This is really annoying to do for each filament, but it does work. However I suggest you try Orcaslicer for this reason.

**Important TPU notes:**

- TPU is pretty sensitive to lots of variables, so these profiles may have more overrides than you are used to. Additionally, in your slicer layer height and Classic vs Arachne slicing can produce significant differences. I prefer **layer heights of 0.16 or 0.2 mm** and **Classic slicing mode**, as it seems to produce slightly better results.

**Important notes:**

- These profiles are tuned on an X1C, with a brass CHT-style 0.4 nozzle installed, for use with a range of layer heights. **If you have a different nozzle size or nozzle kind (steel/brass), these will not be good profiles. See my the links above for standard nozzles.**
- Each 3MF also contains some of my own optimized settings for 0.16 mm prints, which I typically use, but these tuned filament profiles are designed/tuned to work across a variety of different print profiles.

**Background:**

I use the Orca Slicer variant of Bambu's slicer because it offers finer-grained control over the slicing process and makes tuning and using tuned filament profiles much easier than Bambu's official slicer, which lacks good calibration routines for some of the most important variables in good printing: **flow rate**, **pressure advance**, and **temperature** and **volumetric flow limits.**

This is particularly true for Bambu's Pressure Advance (they incorrectly call this “flow”) calibration, which forces you to run it every time and is unreliable, particularly on the popular textured PEI surface.

Each of these profiles has been tuned for:

- **Flow rate** (aka extrusion multiplier)
- **Pressure advance** (aka linear advance)
- **Temperature** (with temp towers)
- **Volumetric flow limits** (my settings are a little conservative based on printing the max volumetric flow rate calibration inside Orcaslicer)
- **Overrides** (I typically try to avoid using these unless I have to)

## This remix is based on

**- PETG - Tuned X1C Print Profiles for Bambu/Orca-Slicer**

by Adam L

## Model files

**chtnozzle_overture_digitalblue_tpu.3mf**

**chtnozzle_overture_clear_highspeedtpu.3mf**

**chtnozzle_ninjatek_grey_cheetahtpu.3mf**

**chtnozzle_inland_white_tpu.3mf**

**bambu_black_hf_tpu.3mf**

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