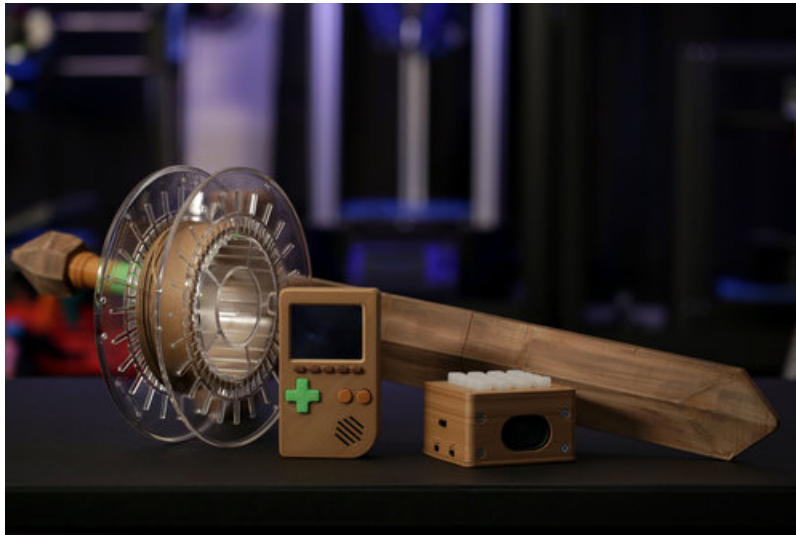




3D Printing with Bamboo Wood Filament

Created by Ruiz Brothers



Last updated on 2018-08-22 03:47:51 PM UTC

Guide Contents

Guide Contents	2
Overview	3
Usage	4
Temperature Guidelines:	4
Compatible Extruders	4
Temperature color	5
Maintenance	6
Properties	7
Cleaning Prints	7
Staining	9
Sanding	9
Multilayer wood stain	10
More Layers	10
Wood Filler	11

Overview



BambooFill is made with a mixture of bamboo wood and PHA/PLA. Parts are sturdy, like a block of wood. It feels and smells just like real wood.



Making things with wood usually requires tools for cutting. With 3D printing we can easily make wooden parts without the need for wood specific tools.

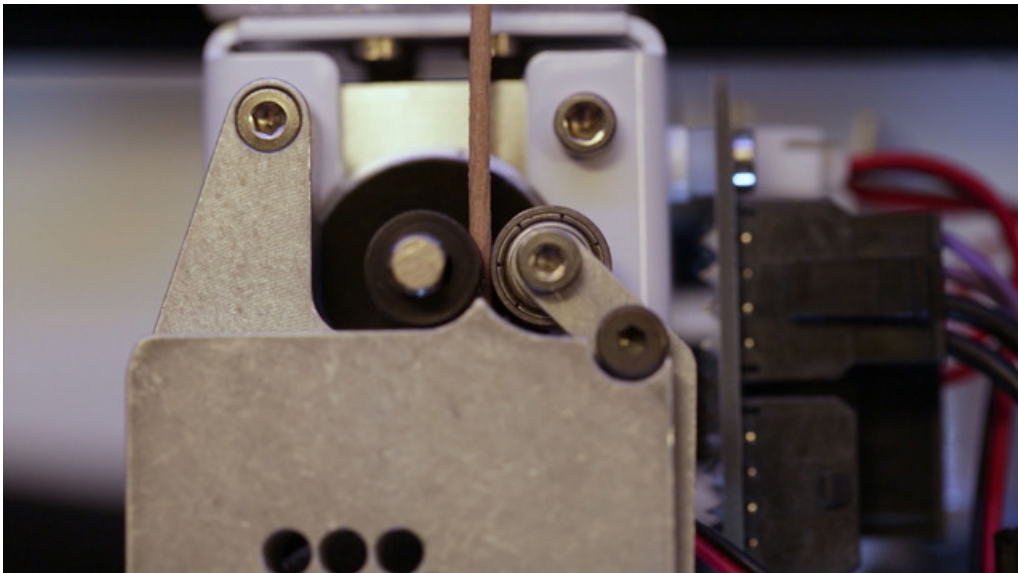
Usage

Temperature Guidelines:

BambooFill prints with your standard PLA settings. Heated bed is not required. For a good adhesion to the platform, we recommend blue painter's tape.

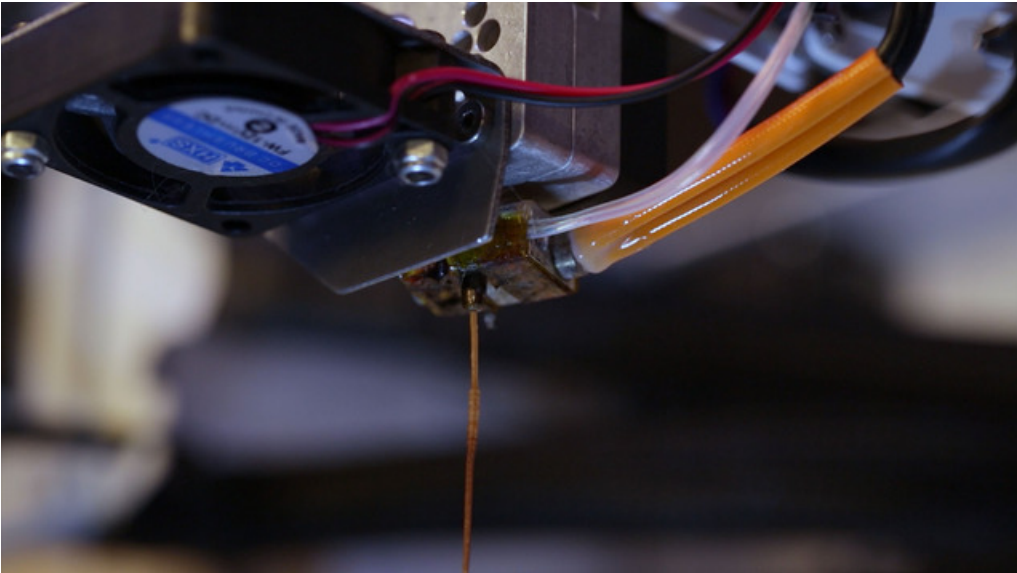
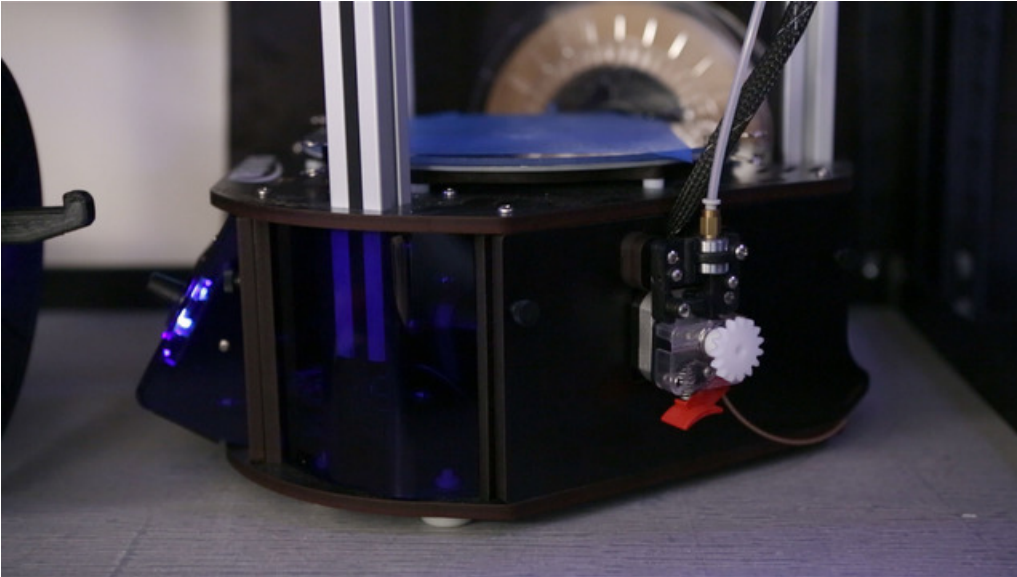
Recommended settings:

- extruder temperature: 190 - 230°C
- platform temperature: 0 - 50°C
- shells: 2 - 4
- resolution: .1mm
- infill: 10%-50%



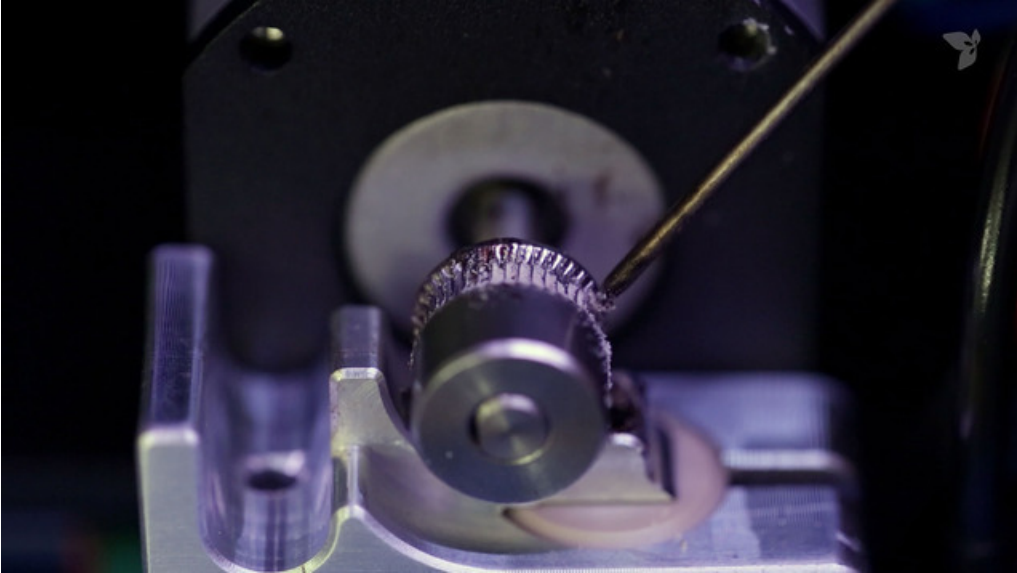
Compatible Extruders

Direct drive and bowden extruders systems are compatible with bambooFill. Colorfabb warns against using any hot-ends which use a teflon isolator coupler, as the filament has been shown to clog these devices.



Temperature color

You can change the color of the filament by switching between higher and lower temperatures. Use 190c for lighter colors and 230c for darker colors. You can even create bands of varying colors.

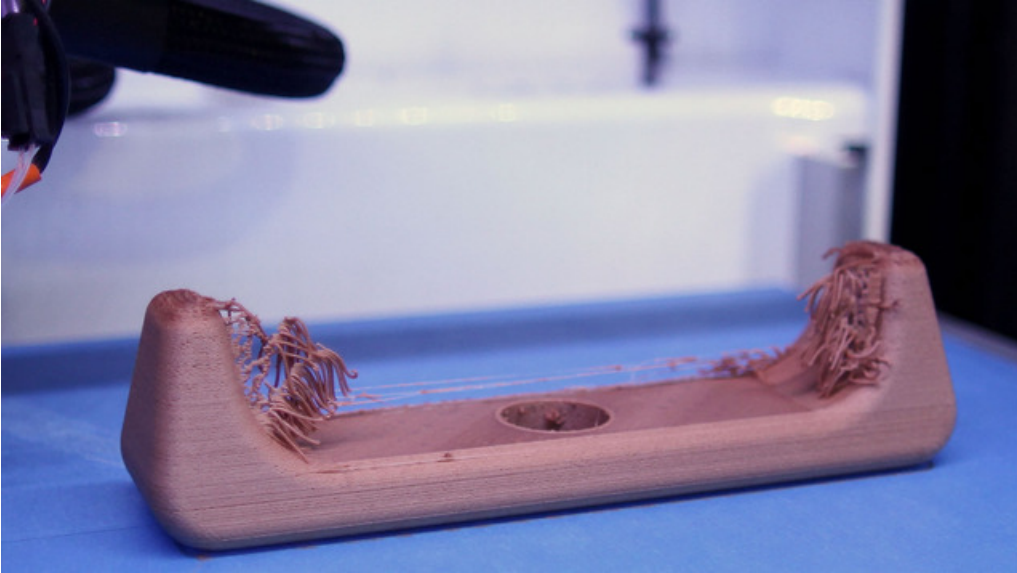


Maintenance

Fast retraction settings can clog gear teeth

Before printing multiple parts you'll want to check that the drive gear isn't clogged with saw dust. Use a metal poker and vacuum to clean each gear tooth. Hit it with a metal brush to make sure all of the teeth are cleaned off.

Properties



Cleaning Prints

Clean up is very simple. Leftover bits from retraction are easy to pull off with your hands. They shouldn't be sharp, just be careful not to get any splinters!



Use flush diagonal cutters and a hobby knife to remove the excess material left behind during printing. You can use your fingers to rub away the loose bits.



Use a flat putty like an iFixit jimmy to get in between crevices and remove tiny artifacts.

Staining



BambooFill is real wood, so we can use wood stains to finish off the parts!

Any wood stain should work, but the MinWax brand worked for our tests. You can find these at your local hardware shop.

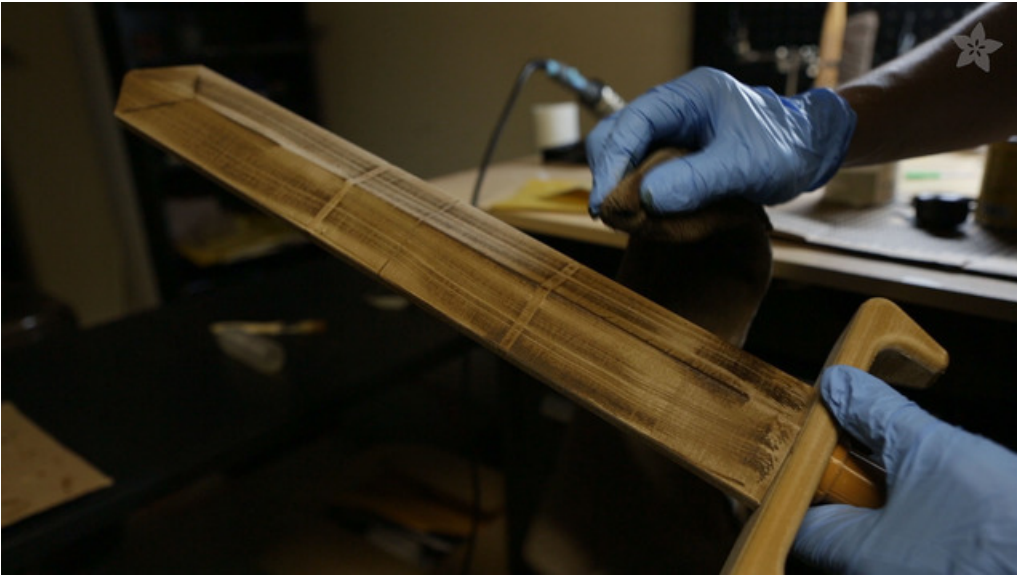
You can stain with different colors or even layer them on top to create a multilayer stain.



Sanding

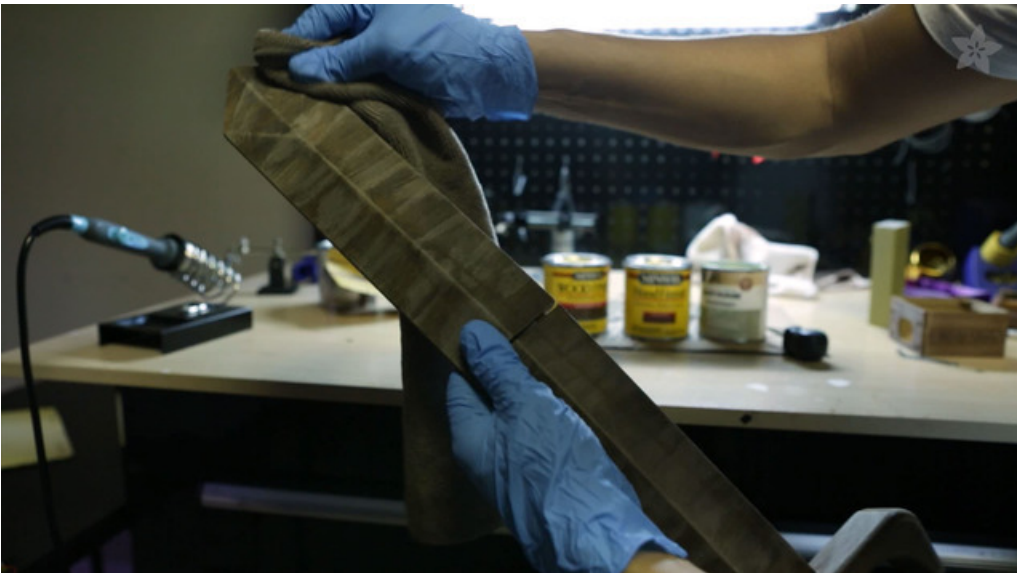
We'll start off by sanding all of the parts down with a 320 grit sand paper. Make sure to get into all of the small spaces.

You'll notice that sanding brings out the chalky white characteristics of the PLA, but it darkens up once we apply the stain.



Multilayer wood stain

We'll start off with a dark walnut for the first layer. Stir and use a cloth to apply a textured stroke to add those wood grain patterns. Don't apply a lot of pressure, just gently glide the cloth across parts. Fold the cloth into a small shape that can fit around smaller pieces.



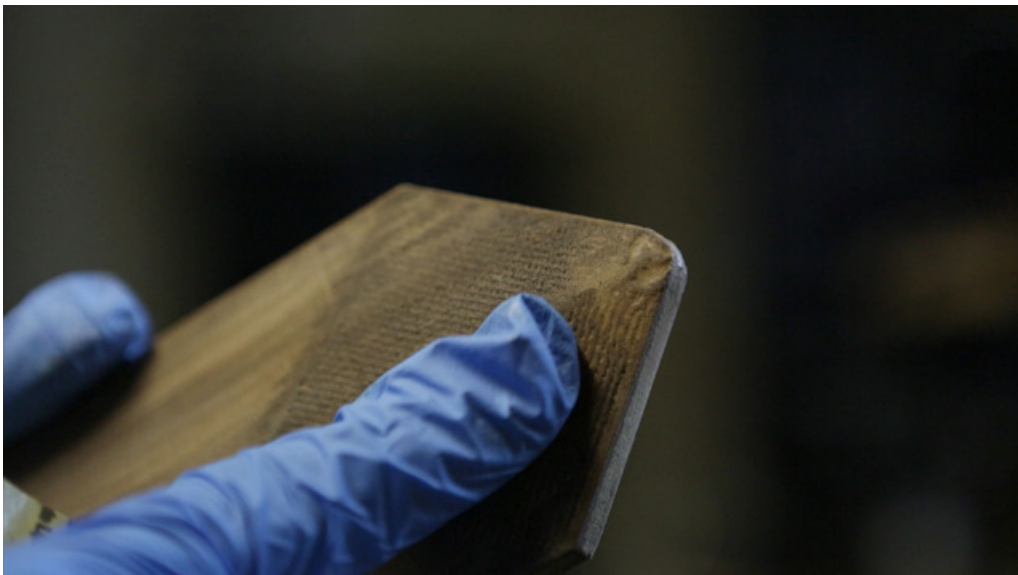
More Layers

Let it dry for about 5 minutes and then use an 80 grit sand paper to remove any blotches. This also helps to get that weathered look. After applying a second coat of a red oak color, we'll sand it down again and then apply a small amount of green. Once applied, quickly wipe it off. This will give it just a hint of green in the wood. To finish off, switch back to the 320 grit sand paper.



Wood Filler

Just like real wood, you can use fillers to plug in gaps. Wood putty worked great for filling in the top part of the blade tip. Apply after staining, let it dry and then sand off any left overs.





You can really see a difference when compared to an unfinished part. Definitely worth the effort to post process wooden prints.