



HOW TO 3D PRINT WITH **SQUATTY POTTIES**

Squatty Potties - 3D Printing with Squatty Potties

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Oh the Squatty Potty. It's the bathroom accessory that makes you go quicker that is apparently sweeping the nation, helping everyone have healthy, happy BMs.

We are not really sure what made us want to print with Squatty Potties... but off we went to find enough Squatty Potties to print with. For each of our studies, we need at least 10 pounds of material to go through the whole process and have enough to send out samples. To reach 10 pounds, we needed 5 Squatty Potties total. An individual user could work with as little as 2 pounds: one Squatty Potty.

There were no markings on the Squatty Potties for what type of plastic they are made from. We guessed that it would be PP (polypropylene) due to the feel and flex.

Check out the steps below and follow along our process of 3D printing with Squatty Potties.

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Step 1: Grinder Preparation

Each Squatty Potty comes with two stickers; a warning label and a promotional sticker, as well as gummy rubber feet. The warning label was harder to remove, but that makes sense since it IS a warning sticker. The promotional label was simple to remove. When removing stickers from any plastic that is going to be extruded into filament, make sure all sticker residue is removed. You can do this with a product like Goo-Gone or something more abrasive like a baking soda and water mixture. Next, the rubber feet were pulled out. Thankfully these feet were held in with friction not with glue.



Step 2: Chunking

To grind the Squatty Potties, the first step was to cut down the full stool into smaller chunks so that the grinder could break down the chunks into shavings. A Sawzall was used to cut the larger stools into chunks. A bandsaw, hacksaw, jigsaw, etc. could be used to break down larger plastic objects into smaller chunks.



Step 3: Grinding into Shavings

Grinding the chunks was a two step process, partly because the chunks made in the previous step were not small enough and had weird angles and shapes that our main grinder could not grab. The first grinder used is a screenless grinder that works by grabbing and shearing little chunks off on the cutting plates. The photo below shows how the grindings are larger than normal.



Step 4: Final Grinding

In this step the coarse grindings were fed into our Filabot Industrial Reclaimer to produce finer grindings that we can extrude with. We could have fed directly into this unit if we initially cut the stools down more into smaller chunks.



Step 5: Filament Extruding

With freshly ground Squatty Potty grindings, it was then time to make filament! Making filament required a minimal setup. PP generally has a lower melt flow making it easy to extrude into filament form. In the last study we worked with PP from vacuum parts, that filament was hard to extrude as the filament was cooling in an oval shape. We were worried that it would happen again, but it did not. That just goes to show how even the same polymers, but different grades can have different extrusion performance properties.

Extrusion temperature of 150°C for the first zone, 170°C for the middle zone, and 130°C for the rear zone was found to be the best temperatures for filament making on our EX6 extruder. The Filabot EX2 has one heat zone and we would recommend starting at 170°C for PP plastic.



Step 6: Test Print

Printing with the Squatty Potty filament was fairly straightforward, with the exception of needing to use our velcro hack that we found during our previous study of vacuum nozzles. Printing temperature was set to 270°C with standard settings similar to PLA.

A great test print by our standards, printed from Squatty Potties!

Check out this link for the “Filabot Test Print” ([Thingiverse number: 2844384](#)).



