



Daemon3D Print

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Getting Started with Tough PLA

What is Tough PLA?

MakerBot Tough PLA allows you to create durable high-impact strength prototypes and fixtures that save time and money.

- As tough as ABS and as printable as PLA
- Greater durability than PLA – which means it can flex more than PLA before it breaks
- Suitable for printing jigs and fixtures with threaded and snap fits that can withstand repeated use
- Warps less than ABS during printing, which makes for more reliable print results
- Similar tensile, impact and flexural strength to ABS

Update Your Software

Make sure you're running the latest version of MakerBot Print and that the latest firmware is installed on your MakerBot 3D Printer

You can download MakerBot Print by navigating to www.makerbot.com/print, which will allow you to prepare and slice your 3D files for Tough PLA.

Installing the Extruder

Unwrap the Smart Extruder+ and press it against the back of the extruder carriage, which the connector pins facing the front of the MakerBot 3D Printer. Magnets will lock the extruder into place.

Loading Filament into the Smart Extruder+

1. Use the control panel dial to select **Filament > Load Filament**.
2. Wait for the extruder to heat.
3. Cut the end of your filament to create a clean edge. You can use scissors or wire cutters to cut a clean edge on the end of your filament. You don't want to load anything with a bulged, twister or sharp edge.
4. Grasp the top of the extruder assembly and push the filament into the extruder's loading tube until you can feel the motor pulling the filament in. If you're running into a problem during this process, unload the filament and repeat step 3. It may help to press the lever on the side of the extruder and gently feed filament towards the hot end at this point.



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5. Wait until you see plastic emerging from the extruder nozzle before pressing the control panel dial to finish the filament load process.
6. Fit the filament guide tube securely into the extruder's loading tube.

Note: Only load MakerBot Tough PLA filament into the Tough PLA Smart Extruder+. Using other filaments can clog your extruder and result in print quality issues. Use of other filament will also void your warranty.

Preparing to Print Over Network/USB Connection

- In MakerBot Print, find your printer from the **Add a Printer** menu and follow the instructions to connect.
- From the printer settings menu, ensure "Tough PLA Smart Extruder+" is selected under "**Extruder Type**". Also ensure MakerBot Tough PLA is loaded in the extruder.

Once you have the proper settings selected, press **Print**.

Preparing to Print to Unconnected Printer for Export

- In MakerBot Print, select your printer type from the Unconnected Printer menu.
- From the printer settings menu, selected "Tough PLA Smart Extruder+" under "**Extruder Type**". Also ensure MakerBot Tough PLA is loaded in the extruder.
- Export the print file to a USB key and transfer to MakerBot printer USB port.
- On the printer interface, select "Print" and "USB Storage". Find you file and begin printing.
- If the file was sliced for the wrong extruder type, you will receive a warning and an option to cancel print. Continuing with incorrect print settings may result in poor print quality.