FormLabs Form 2 SLA 3D Printer

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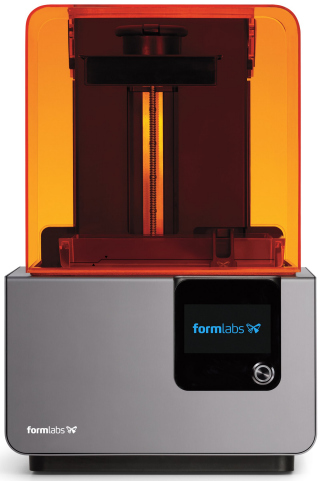
Tool Type: “3D Printer”
Location: “Innovations Workshop”

Supervisor	Tool Lead
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Description: “Stereolithographic 3D printer”	
Manufacturer: “Formlabs”	

About

The Form 2 Printers (Magnificent Ram and Electric Colt) are located in Fume Hood #2 in 2448 Elings Hall.

The Form 2 printers are liquid resin stereolithographic 3D printers capable of producing high resolution accurate models out of a variety of materials. Liquid resin printers use a bath of reactive resin which is precisely cured using specific wavelengths of light. This printer is particularly well suited for thin high aspect ratio features and models requiring great surface accuracy.

Based on the material and application, some prints will benefit from post process UV curing to strengthen and harden the finished part. See part curing documentation in UV FormCure reference documentation.

Training Documentation

Form 2 SOP

Detailed Specifications

Build Volume: 14.5 x 14.5 x 17.5 cm (L x W x H)
X,Y Accuracy: ~150 ish microns
Layer Thickness: 25-300 microns
Printable Materials: Standard resin (clear or available colors), Durable resin, Flexible resin

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Safety Concerns

The resin used in the Form 2 3D printers is considered hazardous. Gloves are to be warn when replacing or removing build plates, build tanks, and resin cartridges. Refer to SDS for disposal and health hazards.

Operating Procedures

1. Check resin cartridge and tank, make sure build material matches and is desired material.
2. If resin is not desired material, disconnect wiper at build tank, remove build plate by sliding towards front of fume hood. Remove cartridge, cap valve on bottom and close valve on top of cartridge. Replace build tank, wiper, and cartridge with desired material.
3. Launch Preform on Ultimaker computer
4. Import desired STL
5. Select “one click print” in the top left corner menu, change position, orientation, resolution and support as desired (note: that Preform will report on print ability of model, changing part rotation can affect print ability.
6. Select print (orange button) from top left menu
7. Select desired printer
8. Press button on Formlabs printer to start print

Reference Documentation

Form 2 design specifications
https://support.formlabs.com/s/article/Design-Specs?language=en_US

flexible_resin_sds_eu.pdf

formlabs_clear-sds.pdf

durable_resin_sds_eu.pdf

workshops_3d_printer_rates_112019_1_.pdf