Crystalmark Etching Tool

Crystalmark	
picture_of_crystalmark	
Tool Type: Etching Tool	
Location: Microfluidics Lab	
Description: [SOMETHING]	
Manufacturer: [SOMETHING]	

About

The Crystalmark Etcher is located in the Microfluidics Lab on the middle table by the Haas CNC in 3430.

It uses air pressure and aluminum oxide abrasive to etch patterns in materials such as glass or silicon. The kerf of the cuts are 700 microns.

The FormLabs 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.

Both the resin cartridges and build platforms are cross compatible with both the Form 2 as well as the newer Form 3 3D printers—however, the build tanks are not interchangeable. Types of resins are distributed between the Form 2 and Form 3 based on frequency used as well as which benefit from the low force SLA process employed by the Form 3 and should not be swapped without consultation with the staff.

Resin expires a year after the date printed on the cartridge.

Safety Concerns

Inhaling large amounts of aluminum oxide can be hazardous. It is recommended to wear a face mask The resin used in the FormLabs 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.

Training Documentation

Form 2/3 SOP

Post-Processing

Form Wash Cleaner

FormCure UV Curing Station

Advanced Post-Processing Webinar from FormLabs

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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Reference Documentation

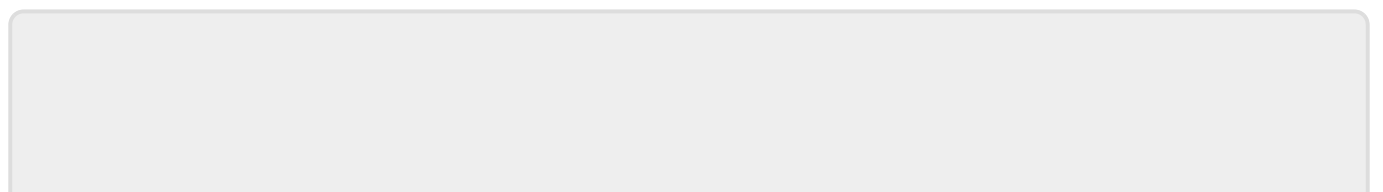https://support.formlabs.com/s/article/Design-Specs?language=en_US

flexible_resin_sds_eu.pdf

formlabs_clear-sds.pdf

durable_resin_sds_eu.pdf

workshops_3d_printer_rates_112019_1_.pdf

Guide to printing with clear resin

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<https://microfluidics.cnsi.ucsb.edu/wiki/> - **Innovation Workshop Wiki**

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