



# MAPTEC

## A Jeweler's Digital Workflow

### DESIGN

PreForm works with any jewelry Cad software that can export .STL or .OBJ files. Compatible software includes: 3Design, RhinoGold, and Matrix.

### PRINT

High accuracy 3D printing with the Form 3 allows you to print up to sixty rings at once with different geometries and complexity, including bangles, filigree, and engraved models.

### CAST

Work with your preferred casting equipment, but make sure to use an investment powder hard enough to withstand the burnout temperatures of photopolymers. Formlabs recommends Certus Prestige Optima investment.



## One Material for Prototyping and Production

20% wax-filled for reliable casting with zero ash content and clean burnout, Castable Wax's high green strength means that printed parts are suitable for both custom try-ons and direct investment casting.

**1RING\*** **COST PER RING**  
2 h 21 min 0.5\$

**40 RINGS\***  
6 h 50 min \*Rings printed at 50 microns



## Delicate Geometries, High Precision and Accuracy

Castable Wax Resin accurately captures intricate features and offers the smooth surfaces stereolithography 3D printing is known for, with no visible layer lines. This material is recommended for filigree, pavé, and pieces with ornate surface detail.



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## Get in touch

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## Form 3

### High Detail Desktop 3D Printing for Jewelry Design and Manufacturing

Reliably reproduce crisp settings, sharp prongs, smooth shanks, and fine surface detail with advanced Low Force Stereolithography technology, the latest innovation from the leader in high resolution desktop 3D printing. The Form 3 supports jewelers from design to client try-on to casting, ideal for rapidly expanding custom services and production as your business grows.

Member of

**MJSA**  
Professional Excellence  
in Jewelry Making and Design



### FORM 3

Dimensions	40.5 × 37.5 × 53 cm	15.9 × 14.8 × 20.9 in
Build Volume	14.5 × 14.5 × 18.5 cm	5.7 × 5.7 × 7.3 in
Layer Height Options	25 - 300 microns	0.001 - 0.012 in
Optics Engine	1 Light Processing Unit 250 mW laser power 25 micron (0.001 in) XY resolution	
Warranty	One year.	



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## The Jewelry Ecosystem

Formlabs' product lineup includes everything you need to get started with 3D printing for jewelry:

- 1 Form 3 Printer
- 1 Form Wash
- 1 Build Platform
- 1 Finish Kit



## Why the Form 3 for Jewelers?

### PROTOTYPING AND PRODUCTION

Whether you're looking to create a one-off custom piece or a small batch for production, the Form 3 prints detailed models for jewelry prototyping, customer try-ons and fittings, as well as patterns ready for casting. No matter if you're a first-time 3D printer user or an expert in the technology, consider the Form 3 as a complementary solution that'll help you to make the most out of your existing tools.

### LOW COST, HIGH QUALITY

The Form 3 offers the quality of industrial machines at a fraction of the cost. Highly accurate parts can be printed at 25, 50, 100 and 300 microns.

### EASY TO USE

The Form 3 is ready to plug and play, with an intuitive touchscreen interface and automatic resin dispensing. Formlabs' PreForm print preparation software is free and easy to use, with automatic support generation and manual editing capabilities.

### LARGE BUILD PLATFORM

The Form 3 has a build volume of 145 x 145 x 185 mm, one of the largest among jewelry 3D printers, making it perfect for production of dozens of rings at a time.



## Castable Wax Resin: Setting the Standard for Desktop Print Quality

### Ornate Geometries, High Precision and Accuracy

Castable Wax Resin accurately captures fine features, like raised text, delicate filigree wires and meshes, and detailed pavé. Castable Wax has a high green strength — that means you can use the same pattern for prototyping, customer try-ons, and direct investment casting. Supports print resolutions: 50 and 25 microns.

### Same Day Castings: Fast Burnout, No Post-Cure

Castable Wax Resin is 20% wax-filled for clean, easy casting with fast, reliable burnout. This resin does not require post-curing, making part preparation fast and foolproof—no wondering if a part is fully cured and ready to cast.



	DESCRIPTION	PHASE	TIME TO TEMP	SCHEDULE °C	SCHEDULE °F
A	Place flasks into oven at room temp.	Insert Flasks	0 min	21 °C	70 °F
	Diffusion Hold Some melt out. Liquid wax diffuses out, increasing airflow to pattern.	Ramp	60 min	4.7 °C/min	8.4 °F/min
		Hold	480 min	300 °C	572 °F
B	Final Burnout Eliminates the remaining resin in the investment.	Ramp	100 min	4.5 °C/min	8.1 °F/min
		Hold	180 min	750 °C	1382 °F
C	Casting Temperature Cool the flask to casting temperature of the selected metal.	Ramp	60 min	4.0 °C/min	7.1 °F/min
		Casting Window	Up to 2 hours	512 °C (or desired casting temp)	954 °F (or desired casting temp)



### DIRECT INVESTMENT CASTING

Highly detailed and intricate jewelry is complicated to produce by hand, and in an industry adjusting to high demand for customized jewelry, it can be difficult for hand-carved wax to keep pace. Use Formlabs Castable Wax Resin to 3D print complex parts that are ready to cast.



### PROTOTYPING AND FITTING

Work with one material throughout prototyping and production: Castable Wax Resin is suitable for both custom try-ons and final production. The matte finish of our library of Standard Resins shows detail exceptionally well, making these materials ideal for rapid and cost-effective prototyping.



### PRINTED MOLD MASTERS

The Form 3 can be used to directly print masters that withstand the temperatures and pressures of vulcanized rubber molding. Use Formlabs Standard Resins for room temperature processes (RTV) and High Temp Resin for high temperature (155°C) vulcanized rubber molding.