



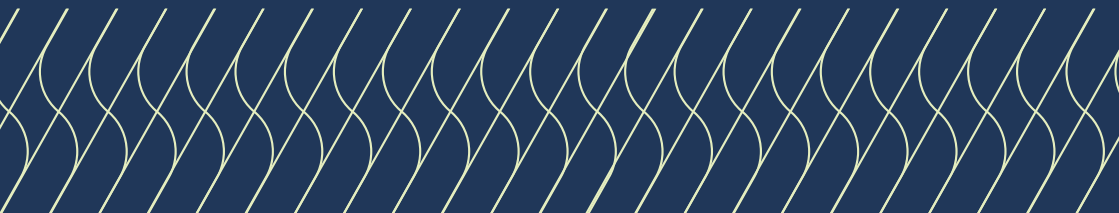
# UV polimer

## Model One

Resins for 3D printing  
dental models.

## User Manual

This instruction manual has been prepared specifically for doctors and dental technicians using the Model One resin for creating dental models.



## Purpose

Model One is a resin designed for professional 3D Dental printing and can be used for creating prototype 3D models: smoothing overlays (aligners), whitening overlays, and retentive appliances (retainers).

The product is not classified as a medical device according to EU Directive 93/42/EEC.

For professional dental use only.

## Compatibility

Model One resin is compatible with printers with a wavelength range of 385 to 405 nm. Printers compatible with Model One resin are available on the website: [www.uvpolimer.com](http://www.uvpolimer.com).

## Available variants

Available in bottles: 0.5 and 1 kg.

Available in four color variants: gray, white, ivory and peach.

## Usage instructions

- Use exclusively as a 3D printing resin for the production of prosthetic and orthodontic models.
- Recommended wavelength range 385–405 nm on a printer.
- Check printer compatibility with Model One resin on the website: [www.uvpolimer.com](http://www.uvpolimer.com) before use.

## Contraindication

Do not use Model One for purposes other than producing dental models.

Any deviation from these usage instructions may have a negative impact on the chemical and physical quality of the resin.

In case of allergic reactions, consult a doctor as soon as possible.

# Warning

## Expressions indicating the type of hazard:

**H317** May cause an allergic skin reaction.

**H413** May cause long-lasting harmful effects to aquatic life.

## Expressions indicating precautionary measures:

### Prevention

**P261** Avoid breathing dust/fume/gas/mist/vapors/spray.

**P273** Avoid release to the environment.

### Response

**P264** Wash hands thoroughly after use.

**P333+P313** If skin irritation or rash occurs: Get medical advice/attention.

### Storage

None

### Disposal

**P501** P501 Dispose of contents/container in accordance with local regulations regarding waste.

## Storage conditions

Store Model One resin in its original packaging or a closed container in a dry, dark place, at room temperature. After each use, tightly close the packaging.

Protect from UV radiation.

## Printing process

### 1. Resin Preparation

Before first use, thoroughly mix the product for at least 30 minutes. Before each subsequent use, it is recommended to repeat this process for 15 minutes.

Before starting the printing, preheat the Model One resin to a temperature of 23–30°C.

Failure to follow these guidelines may result in color deviations or printing problems.

## 2. Filling the printer tank

You should pour Model One into the printer tank, paying attention to the markings indicating the maximum resin level. Exceeding this level can, in extreme cases, damage the 3D printing machine.

## 3. Printer Settings

Follow the user manual available on the website: [www.uvpolimer.com](http://www.uvpolimer.com), where you'll find print parameter cards for Model One resin for various 3D printers.

## 4. Finalizing the Printing Process

After the printing process is complete, remove the platform from the 3D printer and place it on a protected paper or fabric surface, with the model facing upwards

Remove the printed models from the platform using the appropriate tool.

# Two-step Print Cleaning Process

To remove excess resin from the print, it is recommended to prepare two containers with clean ethyl alcohol.

The first step involves immersing the printed object in ethanol with a concentration above 90% in an ultrasonic cleaner for about 3 minutes. Then rinse the model in clean ethanol with a concentration above 90%.

The total contact time of models with ethanol should not exceed 5 minutes.

## Print Curing

After removing from the alcohol bath, blow air through the print using compressed air. Then leave it for about 10 minutes to allow the remaining ethanol to evaporate.

Perform the final curing by placing the print in a UV lamp. This will reduce residual monomer and achieve the desired mechanical properties.

## Final Processing

Some models may require the use of support structures during the printing process. It is recommended to remove them before final curing to avoid damage.

For optimal results, additional processing can be carried out using available dental equipment.

**NOTE:** Color differences in resin may depend on the product batch or improper mixing.

To achieve desired mechanical properties, carry out the curing process for the obtained prints.

Tests for final resin polymerization were conducted using three types of UV lamps with a wavelength range of 375–405 nm. The results obtained are presented below.

Characteristic values for selected types of UV lamps:

### Formlabs Form Cure

Material type:	Curing time: (min)	Temperature /Power	Shore D hardness	UV Light (nm)
Model One	10	45°C	84,4	405

### Anycubic Wash & Cure

Material type:	Curing time: (min)	Temperature /Power	Shore D hardness	UV Light (nm)
Model One	30	Ambient temperature	83,2	405

### XYZ Cure 180

Material type:	Curing time: (min)	Temperature /Power	Shore D hardness	UV Light (nm)
Model One	15	Position 3	85,7	375–405

If a device other than those mentioned above is used, the final polymerization should be carried out for 20 minutes at a temperature of 60–80°C.

All types of lamps used for testing have safeguards against human exposure to harmful UV radiation. Nevertheless, it is recommended to use special protective eyewear.

# Waste Disposal

In its polymerized form, the resin poses no threat to the environment. In liquid form, it should be treated as chemical waste and disposed of according to the applicable disposal regulations.

Detailed guidelines for handling chemical waste can be obtained from the appropriate authorities.

## Symbols on the packaging



Manufacturer



Production Date



Batch Number



Article Number



Shelf Life



Temperature Limit (5–35°C)



Protect from Sunlight



Hazards and Precautions