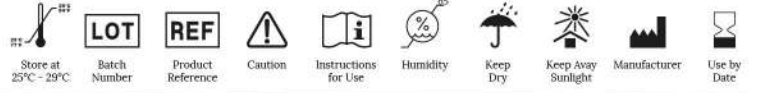


# Instructions for use

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TD.10.15

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## CRS® Custom Model Resin

Printer compatibility 385 nm / 405 nm

### Description:

The instructions for use are for dental professionals who use Custom Model Resin as a material for dental models.

This instruction for use also provides information about tips&tricks, safety and environmental aspects. In case more information is needed, contact the reseller.

Custom Model Resin is an alternative to traditional material for the fabrication of dental models. It is intended exclusively for professional dental work.

### Indications for Use:

Custom Model Resin is a light-curable polymerizable resin intended to be used for fabricating teeth models, study models, wax-up models and thermoforming applications.

Custom Model Resin is an alternative to traditional dental model material.

Custom Model Resin is not intended for medical use.

### Contraindications:

Custom Model Resin should not be used for any other purpose than as a 3D print resin for the manufacturing of dental models.

In case of an allergic reaction, please contact a medical physician.

### Notes:

Custom Model Resin is intended to be used in combination with DLP and LCD based 3D printers that support CRS resins.

Printer and resin must be optimized to each other in order to produce complete and precise printed parts. If the printer and resin are not optimized with respect to each other this may have an adverse effect on the accuracy and physical quality of printed parts.

CRS shall not be held liable for any damage caused by misuse.

Always keep bottle tightly closed, carefully close immediately after each use.

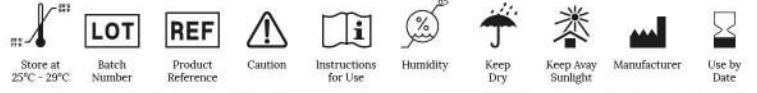
Product may cause allergic reactions.

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Product may cause allergic reactions.

### Warning and Precautions:

Custom Model Resin is a non-toxic material after the proper printing and post-processing procedures.

**Skin Contact:** May cause skin irritation. If unprocessed resin contacts skin, wash thoroughly with soap and water. May cause an allergic skin reaction. If skin sensitization occurs, stop using. If dermatitis or other symptoms persist, seek medical assistance.

**Inhalation:** High vapor concentration may cause headache, irritation of eyes and/or respiratory system. If exposed to a high concentration of vapor or mist, move to fresh air. Use oxygen or artificial respiration as required.

**Eye Contact:** Wash the contacted area thoroughly with soap and water.

Ingestion: Contact and seek medical assistance immediately.

### Fabrication of Device:

#### Design:

The data to be produced must be prepared in .stl format with the support of CAD software by the relevant person.

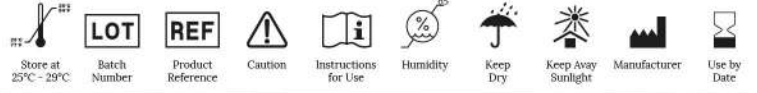
To achieve optimal benefits from the printed models, a minimum wall thickness of 2.5 mm is recommended for the designs.

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### **Support and Nesting:**

The layout and support settings in the slicer program should be configured according to the support settings prepared or recommended by CRS for the specific design you will be printing.

In case more information is needed, contact the reseller.

### **Print:**

Ensure the 3D printer is clean prior to use, including the imaging area and any optical surfaces. Ensure the resin tray is clear of solid debris prior to commencing a print. The presence of solid particles in the resin may cause deformation or failure of the printed objects.

Nitrile gloves should be worn at all times when handling CRS liquid resins up until the finishing step. Avoid contact with skin.

### **Mix Before Use:**

Shake bottle mightily prior to pouring for at least one minute.

Stir material with a soft spatula. Take care not to damage the bottom of the resin tray. This step is necessary to re-disperse the (possible) pigment sediment from the bottom of the vessel.

Colour deviation and print failures may occur if insufficiently mixed.

### **Fill Resin Tray:**

Ensure the temperature of the resin is between 20 and 30°C (68 and 86°F) and prevent exposure to direct sunlight. Pour the resin into the resin tray of the 3D printer.

### **Printer Settings:**

Custom Model Resin is optimised to build parts using light with 385nm or 405nm wavelength.

You need to use the customized and validated resin profile settings for LCD or DLP technology printers.

You must ensure the calibration and light intensity accuracy of the 3D printers you are using for measurement precision.

You can find the recommended profile settings from CRS on the website or through the dealer.

Ensure the film of the resin tray is clear of any debris before starting the print.

### **Part and Support Removal:**

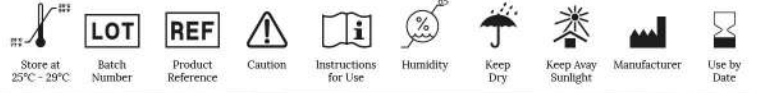
After your device has been printed, remove it from the print platform using the provided print removal tool. Remove all supports using a flush cutter or round disc. Cut as close as possible to the the printed part to minimize the smoothing and finishing procedure.

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### **If Print Fail:**

Remove the resin tray from the printer and filter the resin through a fine 190 Micron paint strainer, if:

- print has failed partially or completely,
- particulates of polymerized residues are visible in the container or stick to the bottom.

### **Wash:**

Wash parts in at least 98% pure isopropyl alcohol (IPA) in a well ventilated area.

Best results are achieved when using a pre and post wash.

Using an ultrasonic cleaning device or alternatively, devices that create a vortex for washing are recommended:

- Pre-wash bath: 120 seconds.
- Post-wash bath: 120 seconds.

**Note 1:** After each washing process, follow by using compressed air to thoroughly dry the printed part, and then assess the cleanliness of the surface.

**Note 2:** Ensure a dedicated IPA bath is used for washing Custom Model parts. Do not wash in IPA that has previously been used for washing other materials. Wiping any resin residue away with a dry cloth is permitted should there be any remaining after the IPA washing steps. Allow parts to dry thoroughly before post-curing

**Note 3:** For fine cleaning after post-washing, a toothbrush can be used.

### **Post-Cure:**

Post-curing is an UV-light treatment to ensure that Custom Model printed parts obtain optimal polymer conversion. Through this the residual monomer is reduced to a minimum and the required mechanical properties are obtained.

Curing devices show different performances based on their features. Curing processes conducted in an inert environment yield more successful results.

This document provides separate information regarding the devices for which we have completed CRS tests. The recommended devices are ranked according to their performances.

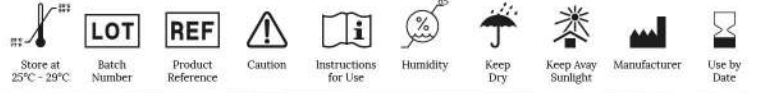
**Note:** Allow parts to dry thoroughly before post-curing. After washing and drying, let the printed parts rest for at least 8 minutes to ensure that the printed parts are free of alcohol residue.

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### 1- Dentalfarm Photopol:

- 1- Place the printed parts in UV curing unit "Dentalfarm Photopol" for 4 min, 120 % + N2
- 2- Turn parts over and allow to cool.
- 3- The same process for the second time in the 4 min, 120 % + N2
- 4- Allow to cool

**Note:** We recommend using the "Dentalfarm Photopol" device for the recommended durations in an inert environment.

### 2-Trasformer Light Box:

- 1- Place the printed parts in UV curing unit "Trasformer Light Box" for 1.5 minutes programme.
- 2- Turn parts over and allow to cool.
- 3- The same process for the second time in the 1.5 minutes program
- 4- Allow to cool

**Note:** We recommend using the "Transformer Light Box" device for the recommended durations in an inert environment.

### 3-NK Optik Otoflash G171:

- 1- Place the printed parts in UV curing unit "NK Optik Otoflash G171" for 1000 flashes.
- 2- Turn parts over and allow to cool.
- 3- The same process for the second time in the 1000 flashes (Total: 2 x 1000 flashes).
- 4- Allow to cool

**Note:** We advise use of the NK Optik Otoflash G171 post-curing box. Place parts inside the G171 Otoflash chamber on the support mesh, do not use a plastic tray inside the chamber.

### 4-Medifive Twin Cure:

- 1- Place the printed parts in UV curing unit "Medifive Twin Cure" for 6 minutes programme.
- 2- Turn parts over and allow to cool.
- 3- The same process for the second time in the 6 minutes programme
- 4- Allow to cool

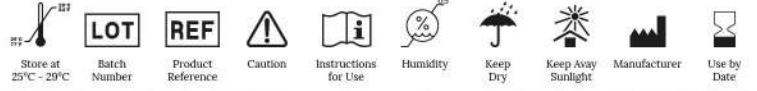
**Note:** "Medifive Twin Cure" device operates at a wavelength of 365-405 nm, so we recommend extending the duration of the curing process.

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### 5-Solidite V:

- 1- Place the printed parts in UV curing unit "Solidite V" for 1.5 minutes programme.
- 2- Turn parts over and allow to cool.
- 3- The same process for the second time in the 1.5 minutes program
- 4- Allow to cool

**Note:** "Solidite V" device operates with 4 units of 150-watt halogen lamps. It is among the validated devices due to being a product that many laboratories have previously purchased.

### 6-Affordable Price Curing Units:

- 1- Place the printed parts in UV curing unit "Phorozen, Anycubic etc.." for 10 minutes programme.
- 2- Turn parts over and allow to cool.
- 3- The same process for the second time in the 10 minutes programme
- 4- Allow to cool

**Note:** "Medifive Twin Cure" devices operates at a wavelength of 405 nm, so we recommend extending the duration of the curing process.

### Storage Conditions, Expiry Date & Transport:

Store the resin in the original packaging at room temperature in a dry, cool and dark area. Close the packaging after each use.

To protect against contamination, cover the material in the resin tray with the lid or a glass plate.

The expiry date of the product is mentioned on the product label along with the lot number.

The standard shelf life is up to 4 weeks in the printer with the cap on, or up to 2 years in the bottle in a cool, dark place without opening the cap.

The product performance is no longer guaranteed once the expiry date is exceeded. Do not expose to UV-light.

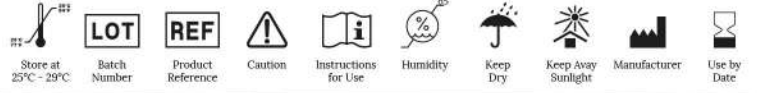
Standard transport conditions apply to this product. There are no restrictions for transport related to hazardous substances.

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### Disposal:

Custom Model Resin in its polymerized form is not environmentally harmful thus can be disposed of in general waste.

Custom Model Resin in its liquid state should be treated as chemical waste. Special disposal requirements are applicable, check with your local, federal, or other regulatory agencies for disposal requirements.

### Delivery Units:

Custom Model Resin is available in 3 colours: Sand, Cosmetic (Black) and Gray

Ordering Information: 5000 gr, 1000 gr, 500 gr