

3D Printing Materials

# Instructions for use



ACKURETTA

## **Intended Use**

CURO Materials are intended for the fabrication of orthodontic and dental applications such as dental models & dies, denture bases, casting crowns and bridges or partial frameworks, flexible gum masks, indirect bonding trays, surgical guide, dental splints, temporary crowns & bridges, and impression trays.

## **Product Description**

CURO Materials are a light-curing resin for the 3D printing of dental appliances for use in DLP and LCD 3D printers. CURO Materials are reactive to wavelengths of light between 385nm and 405nm.

## **Instructions for Hygiene**

The dental appliances produced with CURO resins are mostly customized and intended for a single-patient. You must clean multi-use appliances between usages. The patient should clean the appliance with soap and warm water, or any over-the-counter, mild cleaning agents for oral devices.

## **Disposal Considerations**

The printed objects produced from CURO materials are not considered an environmental hazard in their final, fully cured state. You must dispose of any unused and non-recyclable liquid materials in accordance with federal, state, and local regulations.

## Warnings & Precautions

- CURO materials contain methacrylate monomers and oligomers which have the potential to cause an allergic reaction in individuals that are sensitive to acrylic-containing products.
- Deviation from the described manufacturing process may compromise biocompatibility, user safety, and lead to unwanted material properties of the finished printed product.
- Refer to the product Materials Safety Data Sheet (MSDS) before handling or using the resin.
- Make sure to use the recommended settings and practices for your printer and post curing process to achieve the desired results. Please refer to the Ackuretta website and precalibrated settings in Ackuretta software for these specific details.
- Make sure to wear personal protective equipment (PPE) when handling CURO materials and any uncured printed parts.
- Avoid contact with skin and eyes when handling the resin and any uncured resin on the printed parts. In case of accidental contact, refer to Section 4: First Aid Measures of the MSDS and seek medical help if required.
- Be careful to not splash or spill the resin when you are pouring it into the vat or handling it in general.
- Do not allow any resin or residue to come into contact with acrylic, more specifically, the orange hood on your FreeShape 120 3D printer. 3D printing resins have a corrosive effect on acrylic.
- Store the material in a cool, dry place 15°C-30°C (59°F-86°F) and away from light.

## Directions for Use

1. We strongly recommend wearing PPE (i.e. safety glasses, lab coat, closed-toe shoes, gloves, etc) while handling CURO materials.
2. Make sure that the resin is the same temperature as the ambient temperature (20-25°C/68-77°F) before printing.
3. Agitate the bottle one (1) hour before use to make sure the resin has an even consistency and to prevent any bubbles. If there are bubbles present, you can remove them with a clean instrument or spatula.
4. Only use the calibrated and/or predetermined settings for your DLP or LCD 3D printer and post curebox as shown on the Ackuretta website. The resin can only be used with a 385nm – 405nm UV light source.
5. Resin coated printed parts must be cleaned of any residue using Isopropyl Alcohol (IPA) within approximately eight (8) hours of completing the print.

Note: Do not allow printed parts to sit in IPA for longer than five (5) minutes because it may cause the object to begin to deteriorate.

## Directions for Post-Processing of Printed Part(s)

1. Remove the printed object from the printer and build platform. If applicable, remove support structures from the part.
2. Put the printed object in an IPA bath. This bath is used to wash any part when it is first removed from the printer.
3. Remove any excess liquid resin from the printed part. You can wipe the printed object, swishing the object in the IPA bath, or use an ultrasonic cleaner to remove the excess liquid.
4. Move the printed object(s) to a second bath. To produce optimal final print quality, use fresh, or at least cleaner IPA with fewer contaminants. You can also use a soft brush, toothbrush, or cotton swab dipped in IPA to remove excess resin.
5. Use compressed air to dry the printed object. Repeat steps 4 and 5 if there is any residue on the printed object.
6. Put the printed object in the post-processing UV box. Make sure to put the object flat-side down to prevent any distortion.
7. Allow the part to cure completely before removing it from the UV box to prevent any defects on the surface. The printed object is then cured and safe to handle without gloves.
8. Perform any final processing (i.e. grinding or polishing) and clean the printed object with soap and water to make sure it is free of any debris.
9. The dental appliance is now safe and ready for use if you have filled these instructions.