Instructions

P2C™ Dental Cast resin

Properties*

Color	Burnout Temperature	Wavelength
Purple	1600-1800°F (871-982°C)	385 nm

**These results are based on the testing methods, frequency and procedures of Ransom & Randolph or its approved suppliers. The levels referenced herein are only for general guidance and do not constitute a firm specification.*

Step 1: Preparation

Mixing the Resin

1. Thoroughly mix the resin. This step is necessary to re-disperse any pigment sediment at the bottom. Insufficient mixing may result in color deviations and print failures
   - Using Bottle: Shake it vigorously for at least 2 minutes before carefully pouring the resin into the tray.
   - Using Roller: Place the resin bottle on a roller mixer for optimal and consistent mixing.
   - In Material Tray: Stir the resin with a soft spatula, being careful not to damage the film in the tray.
2. Remove any bubbles with a clean spatula.

Step 2: Printing Process

1. Prepare the STL file by importing it into the corresponding slicing software.
2. Ensure proper design and placement of support structures to avoid print failures.
3. Apply the settings for P2C Dental Cast resin, which can be found at Ransom-Randolph.com/3D-Dental-Resins.
4. Ensure the print platform is clean, dry, securely placed, and locked on the platform arm.
5. Follow the printer manufacturer's instructions during operations.
6. Once the printing process is complete, post processing is required. If post-processing cannot be completed immediately, leave the printed models in the printer until ready.

Step 3: Post-Processing

1. Carefully detach the printed objects from the build platform using a firm spatula.
2. Remove support structures as needed.
3. Verify the fit of the 3D printed part on the master model before proceeding.
4. Clean the print objects in two steps using isopropyl alcohol (IPA) baths:
   - Dirty Wash: Clean for 2 minutes in a reusable IPA solution.
   - Clean Wash: Thoroughly clean for 2 minutes using IPA solution.

Step 4: Post-Curing

1. Prepare a post-curing unit with the P2C Dental Cast resin settings, which can be found at Ransom-Randolph.com/3D-Dental-Resins.
2. Post-cure the cleaned print objects according to the manufacturer's instructions for the curing unit to ensure complete polymerization and stability before casting.

Step 5: Pattern Setup

1. Check the fit of the castable pattern on the corresponding master model.
2. Lightly polish the part with a rotary brush to remove any remaining support marks.
3. Using a rubber base, sprue the patterns in a conventional manner, either by attaching wax sprues or utilizing printed sprues. A removable flask or a burnout compatible flask (such as a cardboard flask with a water-resistant liner) is recommended for best results.

Step 6: Investing & Burnout

Investing

1. Follow investment manufacturer's instructions for mixing, pouring, and setting bench cure. For high-accuracy casting, invest using Biovest® investment is recommended.

Burnout (Flash-Fire Method)

2. Place the mold in a preheated oven at 1600-1800°F (871-982°C).
3. Allow the oven to hold at the temperature for at least 1 hour before casting.

Tips

- P2C Dental Cast resin is validated as part of the the R&R® P2C™ Print-to-Cast System, ensuring seamless integration from print to cast.
- P2C Dental Cast resin can stain clothing; wear appropriate protective clothing.
- After printing, ensure the tray is clear of any cured debris. Printing with cured debris may cause damage to the tray or distort future prints.
- Deviation from the recommended processing instructions can negatively impact the resin's chemical and physical properties, affecting the quality of the prints.
- P2C Dental Cast resin is one part of the overall 3D printing process. Specific printing settings can be found in the instructions for use for your respective printer or can be accessed at Ransom-Randolph.com/3D-Dental-Resins.
- For any questions, please contact technical support at Digital@Ransom-Randolph.com.

Storage

Keep the container tightly sealed and close it immediately after each use to prevent curing from ambient light. Store at room temperature in a dry, dark area. Do not use the resin after its expiration date as its properties may degrade.

Safety

Warning. May cause an allergic skin reaction. Wear protective gloves, protective clothing, eye protection, and/or face protection. Avoid skin or eye contact. If contact occurs, wash thoroughly after handling. Harmful to aquatic life with long lasting effects. Treat as a chemical waste while in it's liquid (uncured) form. Follow local, federal, or other regulatory guidelines for disposal. Once polymerized (cured), it can be disposed of as general waste. See SDS for more information.

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