

R&R® 3D MODEL RESIN INSTRUCTIONS

Preparation

1. Thoroughly mix the resin.

Note: This step is necessary to re-disperse any pigment sediment at the bottom. Insufficient mixing may result in color deviations and print failures.

- If mixing in the bottle, shake it vigorously for at least 1 minute before carefully pouring the resin into the tray.
 - If using a roller, place the resin bottle on a roller mixer for optimal and consistent mixing.
 - If mixing in the 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.

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 specific to the R&R 3D Model resin you're using, which can be found at ransom-randolph.com/model-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.

Post-Processing

1. Carefully detach the printed objects from the build platform using a firm spatula.
2. Remove support structures, if present.
3. Clean the print objects in two steps using isopropyl alcohol (IPA) baths:

Note: The entire cleaning process should not exceed 5 minutes, as prolonged exposure can distort or affect the model's strength.

- Dirty Wash: Clean for 2 minutes in a reusable IPA solution.
- Final Clean: Thoroughly clean for 2 minutes using IPA solution.

Post-Curing

1. Prepare a post-curing unit with the appropriate settings for the R&R 3D resin you're using, which can be found at ransom-randolph.com/model-resins.
2. Post-cure the cleaned print objects according to the manufacturer's instructions for the curing unit.

Working with Printed Models

- Printed models can be duplicated with hydrocolloids, such as Uniflex™ duplicating material, or silicone rubber, such as Lab-Flex™ silicone rubber.
- When using models to create orthodontic appliances or denture bases, apply a non-food grade silicone mold release agent to prevent acrylic from adhering to the model's surface.
- Models can be used with the vacuum form method to create aligners, retainers, and indirect bonding trays.

Important Tips

- R&R 3D Model resins can stain clothing; wear appropriate protective clothing.
- Some users may experience skin sensitivity to R&R 3D Model resins. Wear protective clothing, goggles, and nitrile gloves when handling.
- 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.
- R&R 3D Model resin is specifically designed for producing dental models. Do not use it for any other purposes.
- Deviation from the recommended processing instructions can negatively impact the resin's chemical and physical



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properties, affecting the quality of the prints.

- R&R 3D Model 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/model-resins.
- For any questions, please contact technical support at digital@ransom-randolph.com.

Storage & Handling

- Avoid skin or eye contact. If contact occurs, wash thoroughly after handling.
- 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.
- Treat R&R 3D Model resin as a chemical waste while in its 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.

Safety

Warning. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Suspected of damaging fertility or the unborn child. See SDS for more information.

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