RI RESIONE M68

RESIONE M68 White Tough 3D Printer Resin User Manual

Model: M68 | Brand: RI RESIONE

1. Product Overview

The RESIONE M68 White Tough 3D Printer Resin is engineered for LCD 3D printing, offering a unique balance of toughness and rigidity. This resin is designed to produce prints that are hard yet not brittle, and tough yet not overly soft, making it ideal for functional parts and artistic creations.

Figure 1.1: RESIONE M68 White Tough Resin and a sample 3D printed part.

Key Features:

- **Excellent Toughness and Rigidity:** M68 resin provides a hard yet non-brittle and tough yet non-soft material for durable prints.
- **Non-yellowing:** The pure white color of M68 resin resists yellowing under long-term indoor storage, preserving the aesthetic of artworks and decorations.
- **High-quality Raw Materials:** Formulated with high-purity, low-irritation premium raw materials.
- **Wide Adaptability:** Compatible with 385~405nm UV LED light sources, suitable for most mainstream LCD/MSLA/DLP resin 3D printers.
- **Mixable:** Can be mixed with F69, F39, or F39T resins to enhance toughness and durability of printed parts.

Figure 1.2: M68 Tough ABS-Like Resin highlights.

2. Safety Precautions

Always prioritize safety when handling 3D printer resin. Follow these guidelines to ensure safe use and storage:

- Wear appropriate personal protective equipment (PPE), including gloves and safety glasses, to prevent skin and eye contact.
- Work in a well-ventilated area to minimize exposure to resin fumes.
- Avoid direct skin contact. In case of contact, wash thoroughly with soap and water.
- If resin gets into eyes, flush immediately with plenty of water and seek medical attention.
- Do not ingest resin. If swallowed, do not induce vomiting and seek immediate medical attention.
- Keep resin away from open flames, heat sources, and direct sunlight.
- Dispose of uncured resin and contaminated materials according to local regulations.

3. Setup

Before starting your print, ensure your 3D printer and workspace are properly prepared.

1. **Prepare Workspace:** Set up your 3D printer in a clean, well-ventilated area, away from direct sunlight. Maintain a stable room temperature, ideally between 20-25°C (68-77°F), as resin viscosity can be affected by temperature.
2. **Shake Resin Bottle:** Before each use, thoroughly shake the RESIONE M68 resin bottle for at least 1 minute to ensure all components are well-mixed.
3. **Pour Resin:** Carefully pour the desired amount of resin into the printer's resin vat. Avoid overfilling.
4. **Level Build Plate:** Ensure your printer's build plate is properly leveled according to your printer's manufacturer instructions.
5. **Calibrate Exposure Settings:** Refer to the "Operating" section for recommended exposure settings for M68 resin. Perform calibration prints if necessary to fine-tune settings for your specific printer.

Figure 3.1: Resin vat ready for printing.

4. Operating

This section outlines the general operating procedures for printing with RESIONE M68 resin.

4.1 Recommended Print Settings

Optimal settings may vary slightly depending on your specific 3D printer model and environmental conditions. The following are general recommendations for 385-405nm UV LCD/MSLA/DLP printers:

Setting	Recommended Value	Notes
Layer Thickness	0.025mm - 0.05mm	Finer layers for higher detail, thicker for faster prints.
Bottom Exposure Time	25-40 seconds	Ensures strong adhesion to the build plate.
Normal Exposure Time	2.5-4.0 seconds	Adjust based on printer power and desired detail.
Lifting Distance	6-10 mm	Sufficient distance for resin to flow back.
Lifting Speed	60-100 mm/min	Slower speeds reduce peeling forces.
Retract Speed	150-200 mm/min	Faster speeds for quicker print times.

4.2 Printing Process

1. **Load Model:** Load your 3D model into your slicing software and apply the recommended settings.
2. **Start Print:** Initiate the printing process on your 3D printer.
3. **Monitor Print:** Observe the first few layers to ensure proper adhesion and curing.
4. **Post-Processing:**

- **Washing:** After printing, carefully remove the print from the build plate. Wash the printed part thoroughly with isopropyl alcohol (IPA) or a dedicated resin cleaner to remove uncured resin.
- **Drying:** Allow the part to air dry completely or use compressed air.
- **Curing:** Place the cleaned and dried part in a UV curing station or under direct sunlight for final curing. Cure until the part is hard and non-tacky.

Figure 4.1: Examples of objects printed with RESIONE M68 resin.

4.3 Mixing with Other Resins

RESIONE M68 resin can be mixed with F69, F39, or F39T resins to achieve different material properties, such as increased toughness and durability. When mixing, ensure thorough agitation to create a homogeneous blend.

Figure 4.2: Illustration of mixing M68 resin with another RESIONE resin.

4.4 Product Video

Your browser does not support the video tag.

Video 4.1: This video demonstrates the performance of RESIONE Tough Resin M68, showcasing its flexibility and durability compared to ordinary rigid resin, and displaying various detailed prints like a T-Rex skeleton, earbuds, and a screw embedded in resin.

5. Maintenance

Proper maintenance of your resin and equipment ensures consistent print quality and extends product lifespan.

5.1 Resin Storage

- Store resin in a sealed, shading, and cool place.
- Keep away from fire and out of reach of children.
- If resin is not used in the 3D printer for more than 1 day, it is recommended to filter the resin with a filter funnel and

pour it into an empty container.

- Do not pour resin from the resin tank back into the original bottle to avoid contamination.

5.2 Equipment Cleaning

- Regularly clean the resin vat and build plate with isopropyl alcohol (IPA) or a suitable resin cleaner.
- Inspect the FEP film in the resin vat for any damage or cloudiness. Replace if necessary.
- Ensure the LCD screen is clean and free of resin spills.

6. Troubleshooting

This section addresses common issues encountered during resin 3D printing and provides potential solutions.

Problem	Possible Cause	Solution
Prints not sticking to build plate	Insufficient bottom exposure time, cold resin, unlevel build plate, dirty build plate.	Increase bottom exposure time, warm resin to room temperature, re-level build plate, clean build plate thoroughly.
Print failures (partial prints, layers separating)	Incorrect normal exposure time, insufficient supports, FEP film issues, resin contamination.	Adjust normal exposure time, add more supports, check FEP film for damage, filter resin.
Printed parts are brittle or soft	Insufficient post-curing, under-exposure during printing.	Increase post-curing time, increase normal exposure time.
Strong odor during printing	Poor ventilation.	Ensure adequate ventilation in your workspace.
Resin not flowing well	Resin is too cold.	Ensure resin is at room temperature (20-25°C) before use.

7. Specifications

Detailed technical specifications for RESIONE M68 White Tough 3D Printer Resin.

- **Brand:** RI RESIONE
- **Model Number:** M68
- **Color:** White
- **Material:** Resin
- **Item Weight:** 1000 Grams (1KG)
- **Curing Wavelength:** 385-405nm UV
- **Compatibility:** LCD/MSLA/DLP 3D Printers
- **Package Dimensions:** 10 x 4.09 x 3.94 inches
- **UPC:** 744119134682, 744119403191
- **Date First Available:** June 24, 2021
- **Manufacturer:** RI RESIONE

8. Warranty and Support

For detailed warranty information and customer support, please refer to the official RESIONE website or contact their customer service directly.

A digital version of the user guide is available for download:

Download User Guide (PDF)

For further assistance or technical inquiries, please visit theRI RESIONE Store on Amazon.