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› ELEGOO ABS-Like 3D Printer Resin 3.0 User Manual

## ELEGOO AU-EL-3D-A050

# ELEGOO ABS-Like 3D Printer Resin 3.0 User Manual

Model: AU-EL-3D-A050

## 1. INTRODUCTION

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The ELEGOO ABS-Like 3D Printer Resin 3.0 is an advanced photopolymer resin designed for MSLA, DLP, and LCD 3D printing. It offers enhanced mechanical properties, including high strength, impact resistance, and toughness, making it suitable for functional prototypes, mechanical parts, and highly detailed models. This resin also features high precision, low shrinkage, good fluidity, and strong stability for reliable and consistent printing results.



Image: ELEGOO ABS-Like 3.0 Resin bottle and a sample 3D print.

## 2. SAFETY INFORMATION

**WARNING: Photopolymer resins can cause skin irritation and allergic reactions. Always follow safety guidelines.**

### 2.1 Handling Precautions

- Always wear **nitrile gloves** and **safety goggles** when handling resin.
- Work in a **well-ventilated area** to avoid inhaling fumes.
- Avoid direct skin contact. If contact occurs, wash immediately with soap and water.
- Keep resin away from children and pets.

- Do not ingest.

## 2.2 First Aid

- **Skin Contact:** Wash thoroughly with soap and water. If irritation persists, seek medical attention.
- **Eye Contact:** Rinse immediately with plenty of water for at least 15 minutes and seek medical attention.
- **Inhalation:** Move to fresh air. If breathing difficulties occur, seek medical attention.
- **Ingestion:** Do not induce vomiting. Rinse mouth and drink plenty of water. Seek medical attention immediately.

## 2.3 Disposal

Cure any leftover resin or resin-contaminated cleaning liquids under UV light until solid. Dispose of the solid resin as general waste. Do not pour liquid resin down drains or into waterways.

# 3. SETUP AND PREPARATION

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## 3.1 Resin Preparation

- Before each use, **shake the resin bottle thoroughly** for at least 30 seconds to ensure proper mixing of components.
- Ensure the resin temperature is between **20°C - 25°C (68°F - 77°F)** for optimal performance. If stored in a cool environment, allow it to warm up to room temperature before use.

## 3.2 Printer Preparation

- Ensure your 3D printer's build plate is properly leveled according to the manufacturer's instructions.
- Verify that the FEP film in the resin vat is clean and free of damage.
- Carefully pour the desired amount of resin into the printer's resin vat, ensuring it does not exceed the maximum fill line.

# GOOD FLUIDITY FOR RAPID PROTOTYPING

25-47% lower viscosity than ABS-like 1.0 and ABS-like 2.0 resin

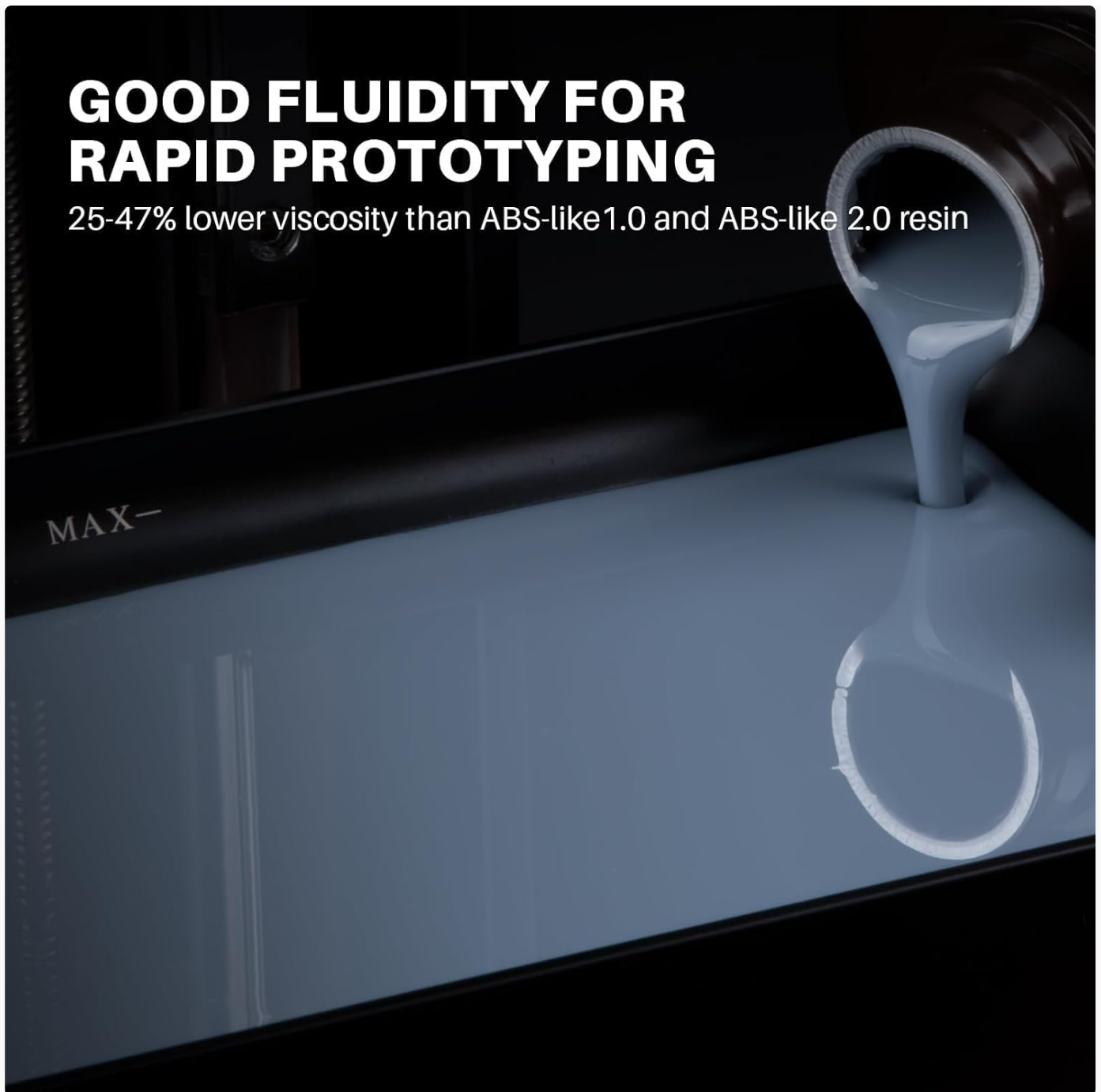


Image: Resin being poured into a printer vat, demonstrating its low viscosity and good fluidity.

## 4. OPERATING INSTRUCTIONS

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### 4.1 Exposure Settings

Optimal exposure settings vary depending on your specific 3D printer model (MSLA, DLP, LCD) and its UV light source. Refer to your printer's manual or ELEGOO's recommended settings for ABS-Like 3.0 resin on their official website for precise parameters. Start with recommended settings and adjust as needed for best results.

- **Bottom Exposure Time:** Typically longer to ensure strong adhesion to the build plate.
- **Normal Exposure Time:** Shorter, for curing individual layers.
- **Lifting Distance & Speed:** Adjust to prevent print failures and ensure smooth layer separation.

## 4.2 Printing Process

- Load your sliced 3D model file onto your printer.
- Initiate the printing process. Monitor the first few layers to ensure proper adhesion.
- The resin's low viscosity allows for quick resin flow-back, improving print success rates and reducing overall print time.

## 4.3 Post-Processing

- **Washing:** After printing, carefully remove the model from the build plate. Wash the printed model in **95% or higher concentration IPA (Isopropyl Alcohol)** or a dedicated resin cleaner for 2-5 minutes to remove uncured resin. Use an ultrasonic cleaner or a wash station for best results.
- **Drying:** Allow the model to air dry completely or use compressed air. Ensure no liquid resin remains on the surface.
- **Curing:** Place the dried model in a UV curing box or expose it to direct sunlight until fully cured. Curing time varies based on UV light intensity and model thickness. Proper curing enhances the model's strength and toughness.

# HIGH STRENGTH AND TOUGHNESS

|                     |                           |                         |
|---------------------|---------------------------|-------------------------|
| <b>71% ↑</b>        | <b>23.3% ↑</b>            | <b>34% ↑</b>            |
| elongation at break | maximum flexural strength | maximum impact strength |



Image: Example of resin's high strength and toughness, showing resistance to deformation from screws.

## 5. MAINTENANCE

### 5.1 Resin Storage

- Store unused resin in its original opaque bottle, tightly sealed, in a cool, dry place away from direct sunlight and heat sources.
- Avoid storing resin in environments with extreme temperature fluctuations.

### 5.2 Resin Vat Cleaning

- After printing, if you plan to store resin in the vat for an extended period, cover the vat to prevent dust and light exposure.
- If changing resin colors or if the resin has been in the vat for a long time, filter the resin back into the bottle using a mesh filter to remove any cured particles.
- Clean the resin vat and FEP film with IPA and a soft cloth. Avoid using abrasive materials that could scratch the film.

## 6. TROUBLESHOOTING

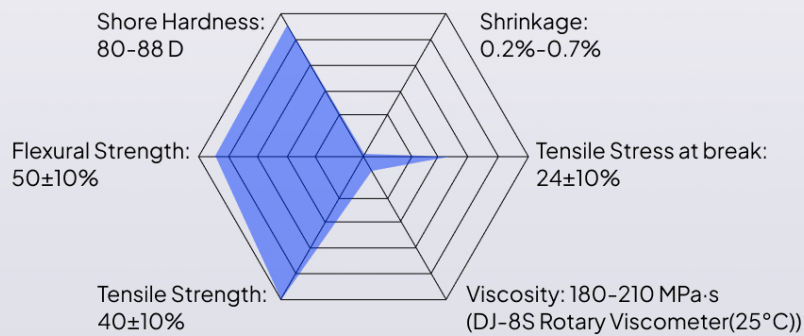
| Problem                              | Possible Cause                                                                         | Solution                                                                                                                                |
|--------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Print fails to adhere to build plate | Insufficient bottom exposure time, cold resin, unlevel build plate, dirty build plate. | Increase bottom exposure time, ensure resin is at recommended temperature, re-level build plate, clean and roughen build plate surface. |
| Warping or deformation               | Over-exposure, insufficient supports, improper post-curing.                            | Reduce normal exposure time, add more supports, ensure even post-curing.                                                                |
| Brittle prints                       | Under-curing, incorrect exposure settings.                                             | Increase post-curing time, optimize normal exposure time.                                                                               |
| Layer separation/lines               | Insufficient normal exposure, unstable printing environment, lifting speed too high.   | Increase normal exposure time, maintain stable room temperature, reduce lifting speed.                                                  |

## 7. SPECIFICATIONS

- **Product Name:** ELEGOO ABS-Like 3D Printer Resin 3.0
- **UV Wavelength:** 405nm
- **Key Properties:** High Strength, High Toughness, High Precision, Low Shrinkage, Good Fluidity, Strong Stability

- **Viscosity:** 25-47% lower than ABS-Like 1.0, facilitating faster curing and easier peeling.
- **Compatibility:** Compatible with a wide range of 405nm UV LCD/DLP 3D printers.
- **Product Dimensions:** 9.37 x 3.86 x 3.86 inches
- **Item Weight:** 2.2 Pounds (1000g)
- **Model Number:** AU-EL-3D-A050
- **Manufacturer:** ELEGOO

## Excellent Performance



Model by DM Stash

Image: Performance metrics of ELEGOO ABS-Like 3.0 Resin.

## 8. WIDE COMPATIBILITY

ELEGOO ABS-Like Resin 3.0 is engineered for broad compatibility with various 405nm UV light-curing 3D printers, including MSLA and DLP models. While optimized for ELEGOO's own range of printers (such as Mars, Saturn, and Jupiter series), it performs reliably across many other brands that utilize the 405nm UV wavelength for curing.

# WIDE COMPATIBILITY

Compatible with All MSLA and DLP 3D Printers



Model by DM Stash

Image: ELEGOO ABS-Like 3.0 Resin compatible with various 3D printers.

## 9. WARRANTY AND SUPPORT

For any questions, technical assistance, or support regarding your ELEGOO ABS-Like 3D Printer Resin 3.0, please contact ELEGOO customer service. Refer to the product packaging or the official ELEGOO website for contact information and details on warranty policies.

ELEGOO is committed to providing high-quality products and excellent customer service. Your satisfaction is our priority.

## ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

### Name

Anonymous

### Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

### Question

Example: How do I reset this device or fix this error?

### Details

Model number, symptoms, what you tried, or the section of the manual you are using.

**Submit question**