ELEGOO US-DP-3D-045

ELEGOO Upgraded Standard Resin 2.0 User Manual

Model: US-DP-3D-045

1. Introduction

The ELEGOO Upgraded Standard Resin 2.0 is a high-quality 405nm LCD rapid UV-curing photopolymer resin specifically engineered for 3D printing. This resin is designed to deliver higher precision and lower volume shrinkage during the photocuring process, ensuring smooth and accurate printed models. Its formulation provides excellent fluidity, quick curing times, and reduced odor, optimizing the user experience for various LCD/MSLA/DLP 3D printers.



Image: ELEGOO Standard 2.0 Photopolymer Resin bottle alongside a highly detailed 3D printed wizard model, showcasing the resin's capability for intricate designs.

2. Safety Information

Always prioritize safety when handling photopolymer resins. This product is intended for use by adults in a well-ventilated area. Adhere to the following safety guidelines:

- **Personal Protective Equipment (PPE):** Always wear chemical-resistant gloves (nitrile or neoprene) and safety glasses to prevent skin and eye contact.
- **Ventilation:** Use the resin in a well-ventilated space to minimize exposure to fumes.
- **Skin Contact:** In case of skin contact, wash immediately and thoroughly with soap and water.
- **Eye Contact:** In case of eye contact, flush immediately with plenty of water for at least 15 minutes and seek medical attention.
- **Ingestion:** Do not ingest. If swallowed, do not induce vomiting. Seek immediate medical attention.
- **Storage:** Store the resin in its original opaque bottle, tightly sealed, in a cool, dry, and dark place away from direct sunlight and heat sources. Keep out of reach of children and pets.

- **Disposal:** Dispose of cured resin as regular plastic waste. Liquid resin should be cured under UV light before disposal or disposed of according to local regulations for chemical waste.



Image: Safety tips for resin usage, highlighting recommended temperature and the importance of wearing a mask.

3. Setup and Preparation

1. **Shake the Bottle:** Before each use, thoroughly shake the resin bottle for at least 30 seconds to ensure all components are well mixed.
2. **Optimal Temperature:** For best results, use the resin in an environment with a temperature between 25°C and 30°C (77°F and 86°F).
3. **Pouring Resin:** Carefully pour the desired amount of resin into the printer's resin vat. Avoid overfilling.
4. **Printer Preparation:** Ensure your 3D printer's build plate is clean and properly leveled according to your printer's instructions.



Image: Demonstrates the resin being poured into a printer vat, illustrating its excellent fluidity.

4. Operating Instructions (Printing Process)

ELEGOO Standard Resin 2.0 is compatible with most DLP/LCD 3D printers, and it performs optimally with ELEGOO LCD 3D Printers such as Saturn 3, Saturn 3 Ultra, Mars 4, Mars 4 Ultra, Saturn 4, Saturn 4 Ultra, Mars 5, and Mars 5 Ultra.

Recommended Exposure Settings for Standard Resin 2.0:

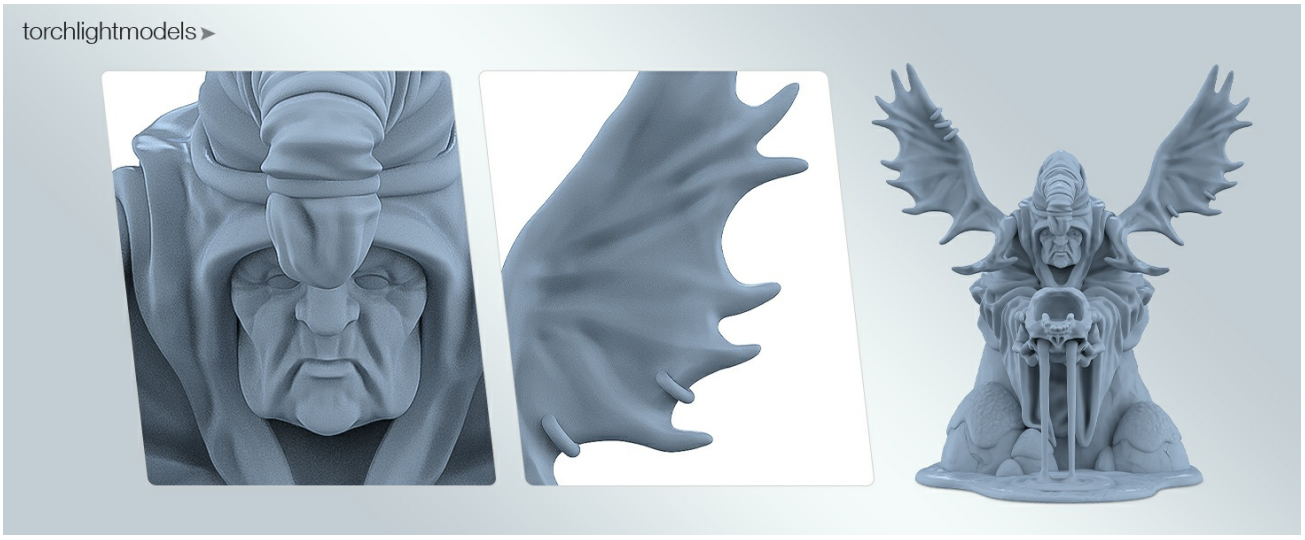


Image: A table detailing recommended bottom exposure, normal exposure, and layer height settings for ELEGOO Standard Resin 2.0 with different ELEGOO 3D printer models.

General Printing Steps:

1. **Slicing:** Use your preferred slicing software to prepare your 3D model. Apply the recommended exposure settings from the table above or fine-tune them for your specific printer and environment.
2. **Transfer File:** Transfer the sliced file to your 3D printer via USB or network connection.
3. **Start Printing:** Initiate the printing process from your printer's interface. Monitor the first few layers to ensure proper adhesion.

3D Printer	Resin Type	Bottom Exposure(s)	Normal Exposure(s)	Layer Height(mm)
ELEGOO Mars 3/Mars 3 Pro	Standard Resin	35	2.5	0.05
ELEGOO Mars 4 DLP	Standard Resin	35	2.5	0.05
ELEGOO Mars 4 MAX	Standard Resin	35	2.5	0.05
ELEGOO Mars 4	Standard Resin	35	2.5	0.05
ELEGOO Mars 4 Ultra	Standard Resin	30	2.5	0.05
ELEGOO Saturn 2	Standard Resin	30	2.5	0.05
ELEGOO Saturn 8K	Standard Resin	30	2.5	0.05
ELEGOO Saturn 3	Standard Resin	30	2.5	0.05
ELEGOO Saturn 3 Ultra	Standard Resin	30	2.5	0.05

Image: A 3D printer in operation, demonstrating the fast curing capability of the resin as a model is being formed.

5. Post-Processing

1. **Remove Print:** Once printing is complete, carefully remove the build plate from the printer. Use a scraper to detach the printed model.
2. **Wash:** Clean the printed model using isopropyl alcohol (IPA) or a dedicated resin cleaner. Agitate the model in the cleaning solution to remove uncured resin from surfaces and crevices. Repeat if necessary.
3. **Dry:** Allow the model to air dry completely or use compressed air to speed up the process. Ensure no liquid cleaner remains on the surface.
4. **Post-Cure:** Place the dried model in a UV curing station or under direct sunlight to fully cure. Curing time varies depending on the UV light intensity and model thickness. This step enhances the model's strength and hardness.



Image: A close-up of a detailed 3D printed wizard model, illustrating the high precision and smooth finish possible with the resin after proper post-processing.

6. Maintenance and Storage

1. **Resin Vat Cleaning:** After printing, if you do not plan to print again soon, filter any remaining resin from the vat back into the original bottle using a mesh filter to remove any cured particles. Clean the resin vat with IPA and a soft cloth.
2. **Bottle Storage:** Store the resin bottle tightly sealed in a cool, dry, and dark place, away from direct sunlight and UV light exposure.
3. **Shelf Life:** The ELEGOO Standard Resin 2.0 has a long shelf life of up to 2 years when stored correctly.



Image: Visual representation of the resin's long shelf life, indicating it can be stored for up to two years.

7. Troubleshooting

If you encounter issues during printing, consider the following common troubleshooting steps:

- **Failed Prints/Poor Adhesion:**
  - Ensure the build plate is properly leveled.
  - Increase bottom exposure time to improve initial layer adhesion.
  - Verify the resin temperature is within the recommended range (25°-30°C).
  - Check for debris or cured resin in the vat or on the FEP film.
- **Model Deformity/Lack of Detail:**
  - Adjust normal exposure time; too much or too little can affect detail.
  - Ensure the model is properly supported in the slicing software.
  - Check for screen issues or uneven UV light distribution.
- **Resin Not Curing:**
  - Confirm the UV light source is functioning correctly.
  - Verify exposure settings are appropriate for your printer and resin type.
  - Ensure the resin has not expired or been contaminated.

8. Specifications

Attribute	Value
Brand	Deeplee (ELEGOO)
Model Number	US-DP-3D-045
Color	2.0 Grey
Material	Photopolymer Resin (Thermoplastic Polyurethane)
Item Weight	1000 Grams
Unit Count	35.27 Ounce
Package Dimensions	9.29 x 3.98 x 3.86 inches

Attribute	Value
Manufacturer	Deeplee
Date First Available	May 18, 2022

9. Warranty and Support

For detailed warranty information and customer support, please refer to the official ELEGOO website or contact their customer service directly. Keep your purchase receipt as proof of purchase.
Official ELEGOO Website: www.elegoo.com

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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.

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