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› 3DMaterials SuperCast 8K Wax-Filled 3D Printer Resin (Model ENGR-A17L) Instruction Manual

3DMaterials ENGR-A17L

3DMaterials SuperCast 8K Wax-Filled 3D Printer Resin

Model: ENGR-A17L

1. PRODUCT OVERVIEW

The 3DMaterials SuperCast 8K Wax-Filled 3D Printer Resin is engineered for high-resolution 3D printing, specifically designed for ultrafine filigree, jewelry, and metal casting applications. This resin offers exceptional detail and a clean burnout process.



Image 1.1: SuperCast 8K Resin bottle alongside intricate 3D printed and cast jewelry pieces.

2. KEY FEATURES

- **Wax-Filled Composition:** Provides strength and stiffness, enabling the printing of ultrafine filigree and detailed jewelry designs.
- **8K Precision:** Achieves high-resolution 3D prints with a 22 μ m resolution due to its extremely low viscosity.
- **No Post-Curing Required:** Post-curing is not necessary and will lead to incomplete burning during the casting process.

- **Low Burning Temperature:** Ensures complete burnout at lower temperatures, leaving no ash residue.
- **Broad Compatibility:** Compatible with a wide range of regular and mono LCD 3D printers.

SuperCast®

1.1 lbs (500 g) / 2.2 lbs (1,000 g)



Casting Wax Filled

Capable of printing ultrafine filigree and jewelry designs.



8K Precision

High-resolution 8K 3D printing with 22um resolution.



No Post-curing

The post-curing will result in incomplete burning.



Low Burning Temperature

Completely even at lower temperature without any trace of ash.



Compatibility

Photon, Creality, Phrozen, Prusa, QIDI, Photocentric, ELEGOO, LONGER, NOVA, Voxelab and more.

Image 2.1: Visual representation of SuperCast resin's primary features, including wax-filled properties, 8K precision, and low burning temperature.

3. PREPARATION FOR USE

1. Always wear appropriate personal protective equipment, including protective gloves, when handling the resin.

2. Store the resin away from direct sunlight or any other light sources.
3. Review this instruction manual thoroughly before commencing use.



Image 3.1: The product label provides essential preparation and usage guidelines.

4. HOW TO USE (OPERATING INSTRUCTIONS)

1. Shake the resin bottle thoroughly before each use to ensure proper mixing of components.
2. Refer to the recommended exposure conditions for your specific 3D printer model. These settings can be found on the [3DMaterials website](#) or by scanning the QR code on the product label for the setting chart [SuperCast Setting Chart \(PDF\)](#).
3. After printing, use Isopropyl Alcohol (IPA) or a suitable alternative alcohol to remove any excess uncured resin from the printed objects.
4. Ensure the printed objects are completely dry before proceeding with the casting process.
5. **Important:** Do not post-cure the printed objects. Post-curing will lead to incomplete burning during the metal casting

process, potentially leaving ash residue.



Image 4.1: SuperCast resin exhibits excellent fluidity, facilitating easy pouring and use.

5. STORAGE

1. Store the resin in a dry, dark room with a temperature range of 10-25°C (50-77°F).
2. Keep the resin away from direct sunlight and other light sources to prevent premature curing.
3. Do not use the product beyond its expiration date, which is printed on the label.
4. Once solidified, this product is not considered harmful to the environment. Dispose of residual cured resin in accordance with local waste management regulations.

6. PRECAUTIONS FOR USE (SAFETY INFORMATION)

1. **Eye Contact:** If resin comes into contact with eyes, do not rub. Immediately flush eyes with copious amounts of water for at least 15 minutes and seek medical attention.

- 2. **Inhalation:** If inhaled, move to an area with fresh, clean air.
- 3. **Ingestion:** If ingested, rinse your mouth thoroughly with water and consult a medical professional for advice.
- 4. **Skin Contact:** If resin contacts skin, flush the affected area with plenty of water for at least 15 minutes. Remove any contaminated clothing and shoes. If symptoms such as inflammation or irritation occur, seek immediate medical attention.
- 5. If any allergic reactions or signs are observed, consult a doctor immediately.



Image 6.1: Detailed safety precautions and handling instructions are provided on the product label.

7. SPECIFICATIONS

Attribute	Detail
Product Dimensions	2.76 x 2.76 x 7.48 inches (500g bottle)

Attribute	Detail
Item Model Number	ENGR-A17L
Weight (500g variant)	1.1 Pounds
Manufacturer	3DMaterials Co., Ltd.
First Available Date	October 30, 2022
Available Sizes	500g, 1000g, 5000g



Image 7.1: SuperCast resin is available in various container sizes to suit different production needs.

8. MECHANICAL PROPERTIES

Property	Metric (Green)	Imperial (Green)
Tensile Strength at Break	15.2 MPa	6,179 psi
Secant Modulus	780 MPa	175 ksi

Property	Metric (Green)	Imperial (Green)
Elongation at Break	< 12.2 %	< 12.2 %

Note 1: Material properties may vary based on part geometry, printing orientation, and specific print settings.

Note 2: Data for these properties were obtained from parts printed using a mono LCD printer at 50 µm layer height, and post-cured with 20mW/cm² of 395 nm LED light for 10 minutes. *(Please remember that for casting applications with SuperCast resin, post-curing is not recommended as it can lead to incomplete burnout.)*

Mechanical Properties

	Metric ¹⁾	Imperial ¹⁾
	Green ²⁾	Green ²⁾
Tensile Strength at Break	15.2 MPa	6,179 psi
Secant Modulus	780 MPa	175 ksi
Elongation at Break	< 12.2 %	< 12.2 %

1) The properties of the material can change depending on the part geometry, printing orientation, and print settings.

2) Data were obtained from parts printed using a printer with mono LCD, 50 µm, and post-cured with 20mW/cm² of 395 nm LED light for 10 minutes.



Image 8.1: Mechanical properties of SuperCast resin, indicating its strength and flexibility.

9. PRINTER COMPATIBILITY

SuperCast resin is designed for broad compatibility with various Mono & RGB LCD 3D printers. Recommended exposure settings for specific printer models are available through the provided setting chart.

Anycubic

Creality

Elegoo

EPAX

Longer

Nova3D

Photocentric

Phrozen

Prusa

Qidi Tech

Voxelab

Zortrax

For detailed exposure settings for your specific printer, please refer to the official guide:

[**Download SuperCast Setting Chart \(PDF\)**](#)

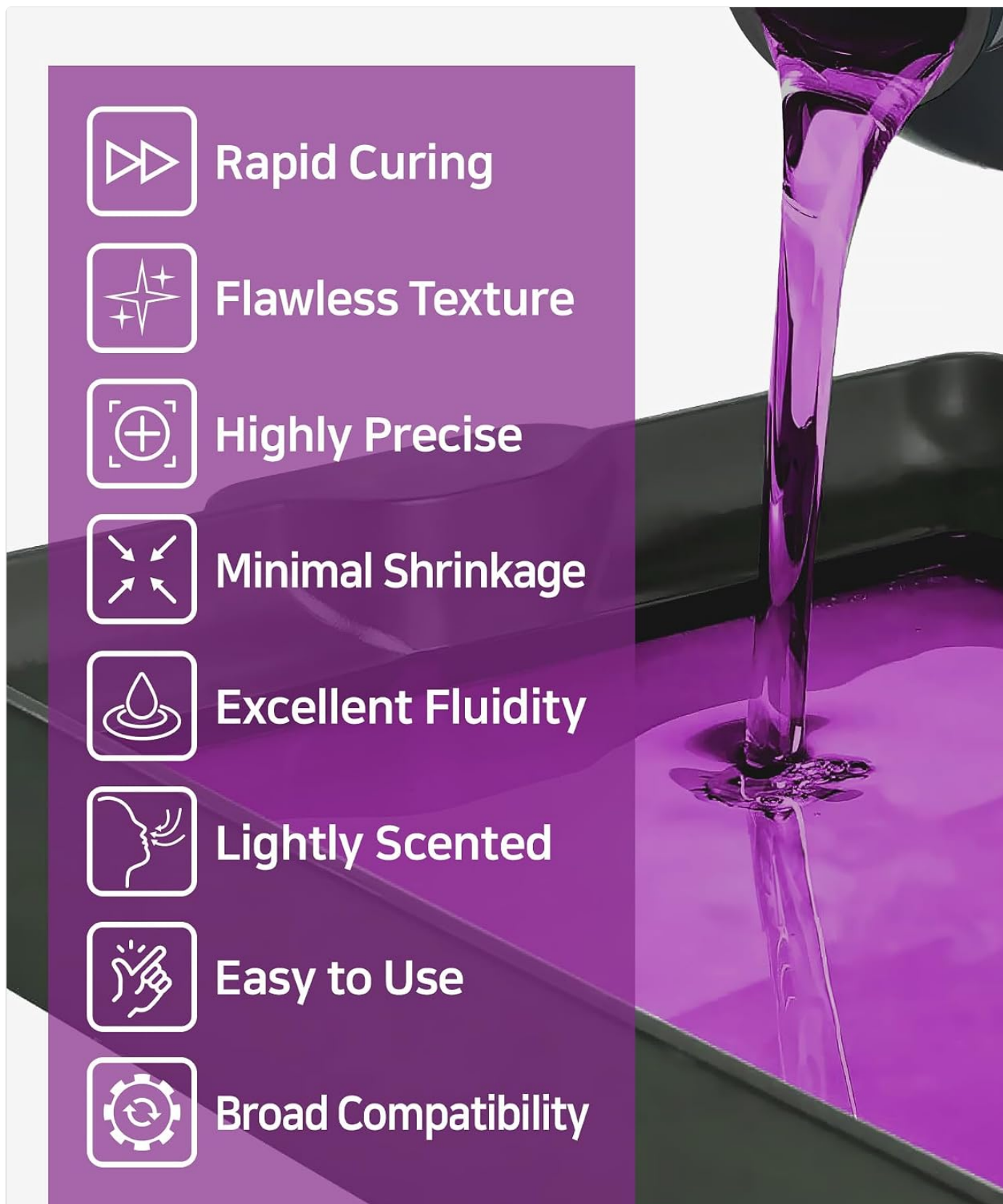


Image 9.1: A visual guide to the wide range of 3D printer brands compatible with 3DMaterials resins.

10. TROUBLESHOOTING

No specific troubleshooting steps are provided in this manual. For issues related to printing or casting, please consult the detailed setting chart or contact 3DMaterials customer support.

11. WARRANTY AND SUPPORT

Specific warranty information is not detailed in this manual. For support, inquiries, or to report issues, please contact 3DMaterials directly.

Manufacturer: 3DMaterials Co., Ltd.

Website: www.3dmaterials.com

Phone: +82)1551 9678

EU Responsible Person: AVOCADO COMMUNICATIONS GMBH

EU Address: Alte Schönhauser Str. 16, 10119 Berlin

EU Email: econfirm@avocadocom.eu

EU Phone: +49-307 698 4360

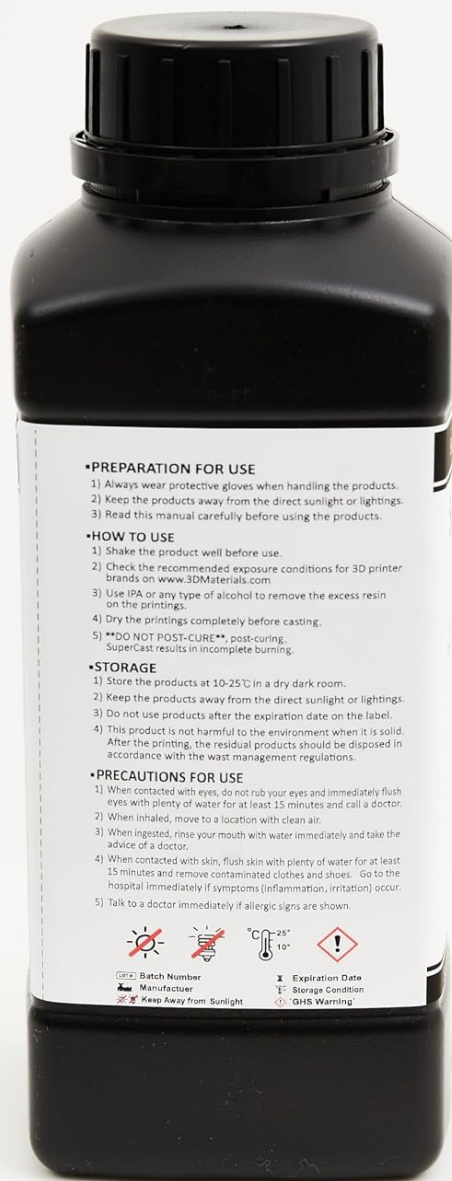


Image 11.1: The product label includes manufacturer contact details and a QR code for additional resources.

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