G217 Clear Tough Resin Instruction

1. The Product Description

   G217 resin is a tough, non-yellowing, highly transparent resin with a slightly bluish color. The print is semi transparent like Frosted glass. Once is sanded to remove the layer lines, it looks completely clear, allowing for producing highly transparent parts. Additionally, the excellent toughness and stiffness of the printed parts it produces are impressive, allowing holes to be drilled, screws to inserted, and other high stress modifications, making it ideal for producing functional parts that will experience long term static load, transient stress or strain, but it is not suitable for underwater applications. G217 is also one of the few transparent resins with excellent performance in detail and accuracy.

2. Material Properties Data

	METHOD	DATA
Viscosity(25℃)	ASTM:D4212-10	920mpa.s
Shore Hardness	ASTM:D2240-05	90D
Tensile Strength	ASTM: D638-14	65.3MPa
Flexural Strength	ASTM: D790-10	77.3MPa
Elongation at Break	ASTM: D638-14	10.40%
Notched IZOD	ASMT:D256-10	30.78J/m
HDT(0.455Mpa)	ASTM:D648-18	68℃

3. Printing

Before printing

There is no need to shake when adding resin liquid to avoid creating a lot of air bubbles. After the resin is poured into the resin tank, wait for the bubbles to disappear (you can also use hot air to accelerate the bubbles to dissipate) before printing

Supports Settings

Medium support is recommended during the printing process to ensure successful printing completion However, the support density should not be too dense, and too dense support may lead to excessive stacking at the support site.

Printing Settings

You can download the resin printing parameters from RESIONE's official website. The detailed operations are as follows: RESIONE's official website —>Support—>Settings

4. Cleaning and Post-curing

Cleaning

Cleaning with the ethanol(concentration≥95%), or IPA. Cleaning and soaking time: ≤10mins. Please use compressed air to dry the prints after cleaning it.

Post-curing

If you use a post-curing box with a power of 40W, our recommended post-curing time is about 5 mins (The post-curing time shall be adjusted according to the power of the post-curing box).
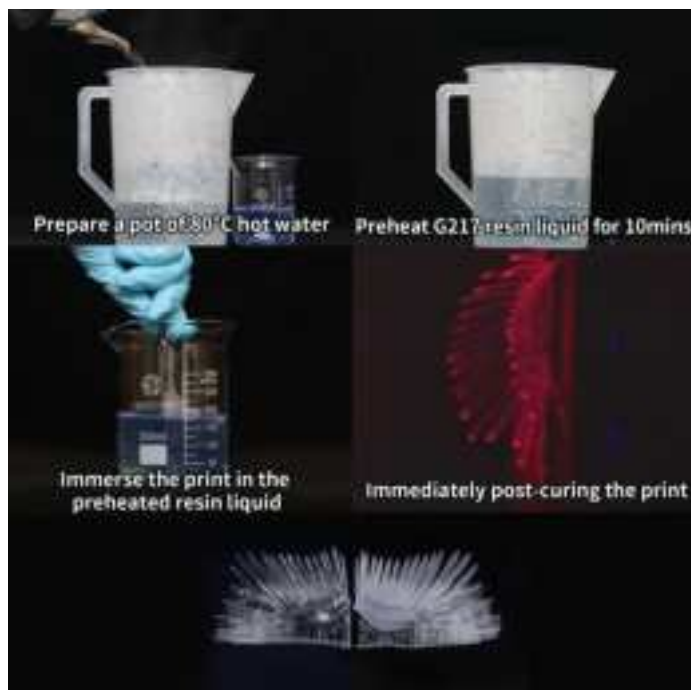

Attentions

a. If the post-curing irradiation time is too long, it will lead to the warping of the prints, and it hardens it and Fragile.

b. The resin prints will be fragile after post-curing. It is not recommended to apply force to the prints immediately. Just need to wait for a while until the internal stress of the prints is completely released.

c. If the post-curing time is too long, the resin prints will turn yellow and irreversible. The slight yellowing caused by normal post-curing can automatically fade away after a period of time. Putting the prints in continuous boiling water can make it quickly fade away.

5. Prints Polishing

a. For prints with large surfaces, sandpaper can be used for polishing. Sand with low to high grit sandpaper, and finally spray with varnish. This process is time-consuming, but the polishing effect and accuracy can be guaranteed

b. For prints with more details or hollow structures, dip coating or spraying can be used to evenly coat the surface of the prints with a layer of clear resin to cover the surface layers and pixel patterns of the prints to make the prints transparent (operation as shown below)

Prepare a pot of 80°C hot water

Preheat G217 resin liquid for 10mins

Immerse the print in the preheated resin liquid

Immediately post-curing the print

6. Storage of Prints

a. Resin prints, like traditional plastics, become hard and brittle when the ambient temperature is low. The prints can maintain normal mechanical properties at 25-35℃.

b. If you need to keep the resin prints with good toughness for a long time, it is recommended to store them in an airtight bag or apply a layer of waterproof paint.

c. The prints should not be placed in a humid environment for a long time, otherwise they will absorb water and soften. Use an airtight bag or waterproof paint to protect your prints effectively.

For more questions, please contact support@godsaid3d.com
Group: https://www.facebook.com/groups/resione
Linktree: https://linktr.ee/resione