

Dazz 3D Castable Resin EC18 Specification

1.Product introduction

LCD wax content castable photosensitive resin EC18 is a solvent-free, low viscosity, high precision photocurable 3D printing resin. Suitable for laser and LED light source. It can be molded under the irradiation of 385nm and 405nm light source. The photosensitive resin mixture formula is optimized and can effectively suppress the beam penetration and avoid deep curing. The minimum layer thickness of single exposure can be controlled at 0.025. Mm. It could achieve high molding precision with low odor and low irritancy. With high wax content,the model is castable. But please pay attention when post curing because the model could be softer than others .

It can be used to make models in the fields of jewelry, hair accessory, etc. This resin can be used in Dazz L120 Basic & L120Pro 3D printer and the same type of LCD 3D printer.

2.Suggested printing parameter(for L120/L120 Pro):

Power 1300- 1500, time 5-8 seconds, layer thickness 0.05mm, exposure time for first layer 60-100s, printing layer amount 8-12.

3.Technical Data

(1).Physical properties of liquid resin

Version	EC18
Appearance	Light purple liquid
Specific gravity(25 °C)	1.01-1.08
Viscosity (25°C , cps,NDJ-8S Viscosity gauge)	50-80cps
Ec critical exposure (mj/ cm ²)	7
Solidify Dp thickness (mm)	0.13
Layer thickness range (mm)	0.02-0.10
Suggested layer thickness (mm)	0.025-0.05

(2).Physical properties of solidified resin

Test Item	Test Method	Range
Hardness (D)	ASTM D 2240	78
Tensile Strength (MPa)	ASTM D 638	20-30
Elongation at Break (%)	ASTM D 638	5-10

Glass transition temperature (°C)	ASTM D 648	50
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(3).Second solidification

After the printing, the parts are removed. Since the molding is only preliminary curing and is not fully cured, deformation may occur under the influence of temperature and humidity. It is recommended to perform second curing immediately after printing to prevent deformation. Proper second curing is necessary. The curing time is as follows, for reference only,customers can determine the curing time according to the thickness of the object:

Ultra violet light	Distance	Power (100mW/cm ²)	Curing time(min)
2000Whigh pressure mercury lamp	15-20CM	100	1-2
300Whigh pressure mercury lamp	10CM	6	3-5
125Whigh pressure mercury lamp	10CM	3	5-10
40W tube (LED)	10CM	<1	5-30

4.User instruction:

(1) .Pour the photosensitive resin (shake evenly before use to avoid chromatic aberration) into a clean resin tank. Air bubbles will be generated during the pouring process. Stand the resin for 5 minutes. The printing can be started after the bubbles disappear.

(2).Adjust the accuracy and speed of the printer according to the model you want to print. After confirming the printing method, press the software to print.

(3).The product is sensitive to sunlight and visible light. When the printer is not in use, the remaining photosensitive resin should be poured out from the resin tank and stored in the dark, but it cannot be poured into the unused resin to avoid pollution.

(4).The speed of printing depends on the type of 3D printer and the intensity of the laser/ LED light. To ensure the success rate of printing, it is recommended that the contact point diameter be greater than 0.6mm.

(5).If the resin come into contact with skin or eyes, rinse immediately with water or soap.

5. Post-processing procedure and note:

(1) The print model should be cleaned with absolute ethanol. Do not soak the model with ethanol or clean the model with ultra-sound cleaner or the model may crack.

(2) Thoroughly blow the model dry with a hair dryer or the like.

(3) After thoroughly drying the model, in order to prevent the bottom plate from warping during after treatment, it can be directly cured with the forming platform. It is recommended to cure with a low-power LED curing lamp at a height of more than 10 cm for 15 minutes (if curing the model in water or if it is too close to the curing lamp or if a high-power UV curing lamp is used, there is a possibility of cracking on the surface of the model). The post-cured print should be stored in a cool dry place.

(4) The photosensitive resin contains dye, so after treatment with different time, temperature and light intensity treatment, the color of the model will be different, which is a normal phenomenon.

6. Packing

500g/bottle.

7. Storage

Store the product in a cool, dry place. The remaining photosensitive resin should not be returned to the original bottle. The bottle cap should be tightened after opening. This product can be stored for 12 months at 18-28 °C, and can not be stored frozen.

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