PLA-based Resin

生物基树脂

***Product Introduction 产品介绍**

PLA-based resin is a high UV curable resin for 3D printing. It has the following characteristics: Green bio(PLA) -based more environment friendly, high hardness and toughness, good precision and resolution, wide range of application in LCD 3D printer. Suitable for all kinds of hand-made, toys design ,dental mold and high resolution industrial model. 生物基树脂是一款高适性光固化3D 打印树脂，树脂具有以下特点：生物基材质对环境更友善，高硬度及高强度，良好的精度与高分辨率，适配范围广，可适配市面上大多数 LCD 光固化打印机。该树脂适合应用于手办、教学、玩具设计、工艺品设计、工业零件设计等

***Resin Property 树脂特性:**

Pre-cure 固化前(液态):

Measurement 测试项目	Test method 测试方法	Value 测试数值
Viscosity 粘度, cps (@25℃)	ASTM D 2196	300-400
Density 密度, g/cm^3 (@25℃)	ASTM D 792	1.05-1.10

Post-cure 固化后(固态)

Measurement 测试项目	Test method 测试方法	Value 测试数值
Hardness 硬度, Shore D	ASTM D 2240	80-85
Flexural modulus 弯曲模量, Mpa	ASTM D 790	1600-2000
Flexural strength 弯曲强度, Mpa	ASTM D 790	70-105
Tensile modulus 拉伸模量, Mpa	ASTM D 638	700-1000
Tensile strength 拉伸强度, Mpa	ASTM D 638	40-65
Elongation at break 断裂延长率,%	ASTM D 638	8-14
Impact strength,notched lzod, J/m 缺口冲击强度	ASTM D 256	40-55
Heat deflection temperature, ℃ 热变形温度	ASTM D648 @66PSI	80-85

***Parameter Suggestion 参数建议:**

Equipment 设备名称	Layer Height 层厚 (mm)	Bottom Exposure Time 底层曝	Bottom Layer Count 底层数	Exposure Time 一般层 曝光时	Lifting Distance 抬升高	Light-off Delay 灭灯延 时	Lift speed 电机速 度

		光时间 (s)	(layers)	间 (s)	度 (mm)	(s)	(mm/min)
Piocreat Halot X1	0.05	40-70	3-5	1.8-2.2	8-10	3-6	180-600
Piocreat C01	0.05	40-70	3-5	3.0-3.5	8-10	1-2	180-480
Piocreat D136	0.05	40-70	3-5	2.7-3.2	8-10	1-2	180-480
Creality Halot R6	0.05	30-70	3-5	2.7-3.2	5	1-2	180-300
Creality Halot Sky	0.05	40-70	3-5	3.0-3.5	8-10	1-2	180-480
Creality Halot Mage S	0.05	40-70	3-5	3.0-3.5	8-10	1-2	180-480
Anycubic Photon Mono M5s	0.05	40-70	3-5	3.0-3.5	8-10	1-2	180-480
Anycubic M7 Pro	0.05	40-70	3-5	2.5-3.0	8-10	1-2	180-480
Anycubic DLP D2	0.05	30-70	3-5	3.5-4.0	5	1-2	180-300
Elegoo Saturn 3 Ultra	0.05	40-70	3-5	3.0-3.5	8-10	1-2	180-480
Elegoo Saturn 4 Ultra	0.05	40-70	3-5	3.0-3.5	8-10	1-2	180-480
Phrozen Sonic mini 8K S	0.05	40-70	3-5	3.0-3.5	8-10	1-2	180-480
Phrozen Sonic Mighty Revo	0.05	40-70	3-5	4.0-4.5	8-10	1-2	180-480
Phrozen Sonic Mega 8K S	0.05	40-70	3-5	2.8-3.3	8-10	1-2	180-480

***Post-Processing Procedure and Note 后处理与清洗:**

1. The print model should be cleaned with absolute ethanol/isoprpanol and can be cleaned with a low-frequency ultrasonic cleaner. If high-frequency and high-power ultrasonic cleaning is used for the model, it may cause certain damage to the surface of the model; 将模型利用无水乙醇或异丙醇超声波震荡机清洗，切勿以高频震荡或用力刷洗模型以免模型表面细节遭受破坏。
2. Thoroughly blow the model dry with a hair dryer or the like; 用气枪或吹风机移除表面清洗液。
3. It is recommended to remove the support for model with supports first, and then post-cure

treatment. If you remove the supports after it's been post-cured , it will easily cause damage to the contact surface of the support point; 后固化前先移除大部分支撑，待后固化完成后进行细节支撑移除与表面修饰处理。

4. For some occasions where certain toughness is required, you can choose to cure with UV lamp for 5 minutes. The printed parts should be kept in a cool dry place. 根据选用的后固化调整对应的后固化时间。

***Safety Precautions 安全注意事项:**

1. Eye Contact: Immediately flush with plenty of clean water (under eye lids) for at least 20 minutes. Hold eyelids apart to ensure flushing. Washing within one minute of contact is essential to achieve maximum effectiveness. Seek medical attention immediately. 如眼睛不慎接触到树脂，请立即用清水清洗，清洗后如仍感觉不适请立即就医。

2. Skin Contact: Remove contaminated clothing and rinse contact area thoroughly with soap and water. 如不甚接触到衣物请立即更换以肥皂与清水立即清洗皮肤与衣物。

3. 3D resin is not approved for use with food, drink, or medical application on the human body. 请勿将树脂与食品接触。

4. For additional information please see the Material Safety Data Sheet. 详情请参考物质安全数据表。

***Storage and Use 储存与使用:**

1. Below 25 ℃ cold storage for 18 months, sensitive to visible light, general illumination visible light will initiate polymerization reaction. 树脂应在 25 ℃条件下避光储存，对可见光敏感，容易引发聚合反应，保质期 18 个月。

2. It is recommended to shake well before using and print at a temperature of 18-35℃。建议使用前摇匀树脂，在环境温度 18-35℃下进行打印。