

Dental Casting Resin

牙科铸造树脂

*Product introduction 产品介绍

Dental casting resin is a low ash residue UV curable resin for 3D printing. It has low shrinkage, high hardness and ash free physical properties for dental application. Suitable for mass-produced products such as casting dental crown, denture bracket for all kind dental and medical casting application. 牙科铸造是一种低灰份残留光固化 3D 打印树脂，此树脂具有低收缩、高硬度、低灰份残留等综合性能，适用于牙冠铸造、义齿支架等牙科和医疗铸造领域。

*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°C)	ASTM D 2196	100-200
Density 密度, g/cm ³ (@25°C)	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	1500-2000
Flexural strength 弯曲强度, Mpa	ASTM D 790	45-65
Tensile modulus 拉伸模量, Mpa	ASTM D 638	600-1000
Tensile strength 拉伸强度, Mpa	ASTM D 638	35-55
Elongation at break 断裂延长率, %	ASTM D 638	10-15
Impact strength, notched Izod, J/m 缺口冲击强度	ASTM D 256	60-80
Heat deflection temperature, °C 热变形温度	ASTM D648 @66PSI	70-80
Bakeout temperature, °C 铸造气化温度	/	850 (1.5 h)

*Parameter suggestion 参数建议:

Equipment 设备名称	Thickness 层厚	Base layer exposure 首层曝光时间	Normal layer exposure 一般层曝光时间	Lift speed 电机速度

Piocreat DJ-89Plus	0.05mm	60s	4.5s	7mm/s
Piocreat C01	0.05mm	60s	4.5s	7mm/s
Piocreat D136	0.05mm	60s	3.6s	7mm/s
Piocreat D150	0.05mm	40s	2.5s	5mm/s
Piocreat D158	0.05mm	40s	2.5s	5mm/s
Piocreat D160	0.05mm	40s	2.5s	5mm/s
Piocreat D190	0.05mm	60s	3.2s	5mm/s
Creality Halot-R6	0.05mm	60s	4.5s	5mm/s
Creality Halot-Sky	0.05mm	60s	4.5s	7mm/s
Creality Halot Mage S	0.05mm	60s	4.5s	7mm/s
Anycubic Photon Mono M5s	0.05mm	70s	4.5s	5mm/s
Anycubic M7 Pro	0.05mm	70s	3.2s	7mm/s
Anycubic DLP D2	0.05mm	40s	5.6s	5mm/s
Elegoo Saturn 3 Ultra	0.05mm	60s	4.5s	7mm/s
Elegoo Saturn 4 Ultra	0.05mm	60s	4.5s	7mm/s
Phrozen Sonic mini 8K S	0.05mm	60s	4.5s	7mm/s
Phrozen Sonic Mighty Revo	0.05mm	60s	7.2s	7mm/s
Phrozen Sonic Mega 8K s	0.05mm	60s	3.8s	7mm/s

***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. 如不慎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 储存方式:**

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