

## Flexible Resin

### 柔性树脂

#### \*Product introduction 产品介绍

Flexible resin is a 3D printing UV curable resin with flexibility and high elongation. It combines the properties of low viscosity, high resilience, high elongation at break, high cushioning performance and low Tg. Apply in Digital light processing (DLP) or liquid crystal display (LCD) 3D printing equipment, which can be used to print high-precision flexible objects. 柔性树脂一款具备柔性和高延伸率的3D打印光固化树脂。很好的结合了低粘度、高回弹、高断裂伸长率、高缓冲性能和低玻璃化转变温度的性能。应用于数字光处理（DLP）或液晶显示（LCD）3D打印设备，可用于打印高精度的柔性物件。

#### \*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	200-400
Density 密度, g/cm <sup>3</sup> (@25°C)	ASTM D 792	1.10-1.20

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 A	ASTM D 2240	35-55
Flexural modulus 弯曲模量, Mpa	ASTM D 790	/
Flexural strength 弯曲强度, Mpa	ASTM D 790	/
Tensile modulus 拉伸模量, Mpa	ASTM D 412	/
Tensile strength 拉伸强度, Mpa	ASTM D 412	5-10
Elongation at break 断裂延长率, %	ASTM D 412	300-500
Impact strength, notched Izod, J/m 缺口冲击强度	ASTM D 256	/
Heat deflection temperature, °C 热变形温度	ASTM D648 @66PSI	/

#### \*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
DJ-89	0.05-0.1 mm	30-50 s	3.5-4.5 s	1-8 mm/s
DJ-89Plus	0.05-0.1 mm	30-50 s	3.5-4.5 s	1-10 mm/s
Halot One	0.05-0.1 mm	20-40 s	4.5-6.5 s	1-3 mm/s

Halot Sky	0.05-0.1 mm	30-50 s	3.5-4.5 s	1-8 mm/s
Halot Mage	0.05-0.1 mm	30-50 s	2.5-4.0 s	1-3 mm/s
Photon Mono M5s	0.05-0.1 mm	30-50 s	3.5-4.5 s	1-10 mm/s
Saturn 3 Ultra	0.05-0.1 mm	30-50 s	3.5-4.5 s	1-10 mm/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。