

## Water Washable Resin

### 水洗树脂

#### Product introduction 产品介绍

Water washable resin is a UV curable resin for 3D printing. This resin has low odor, low shrinkage, and water washability. It can be washed directly with water without organic solvents, effectively avoiding volatile organics and it's safe doubt. This resin combines high precision, high strength and a certain toughness, and it is suitable for mass-produced products such as garage kit, teaching, toy design, handicraft design, footwear design, architectural design, industrial parts design, etc. 水洗树脂是一款光固化 3D 打印树脂，此树脂具有低气味、低收缩、可水洗性，可直接使用水清洗而无需有机溶剂，有效避免可挥发有机物和安全疑虑。此树脂兼具高精度、高强度和一定的韧性，适合用于手办、教学、玩具设计、工艺品设计、鞋业设计、建筑设计、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°C)	ASTM D 2196	150-250
Density 密度, g/cm <sup>3</sup> (@25°C)	ASTM D 792	1.10-1.15

Post-cure 固化后(固态)

Measurement 测试项目	Test method 测试方法	Value 数值
Hardness 硬度, Shore D	ASTM D 2240	78-79
Flexural modulus 弯曲模量, Mpa	ASTM D 790	950-1020
Flexural strength 弯曲强度, Mpa	ASTM D 790	45-75
Tensile modulus 拉伸模量, Mpa	ASTM D 638	750-820
Tensile strength 拉伸强度, Mpa	ASTM D 638	30-46
Elongation at break 断裂延长率, %	ASTM D 638	10-14
Impact strength, notched Izod, J/m 缺口冲击强度	ASTM D 256	18-19
Heat deflection temperature, °C 热变形温度	ASTM D 648 @66PSI	62

#### \*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	30-60 s	2.0-3.0 s	1-8 mm/s
DJ-89Plus	0.05-0.1 mm	30-60 s	2.0-3.0 s	1-10 mm/s
Halot One	0.05-0.1 mm	20-40 s	2.5-3.5 s	1-3 mm/s

Halot Sky	0.05-0.1 mm	30-60 s	2.0-3.0 s	1-8 mm/s
Halot Mage	0.05-0.1 mm	30-60 s	1.5-2.5 s	1-3 mm/s
Halot Mage Pro	0.05-0.1 mm	30-60 s	1.0-1.5 s	1-50 mm/s
Photon Mono M5s	0.05-0.1 mm	30-60 s	2.0-3.0 s	1-10 mm/s
Saturn 3 Ultra	0.05-0.1 mm	30-60 s	2.0-3.0 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 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。