EC51 Fast ABS-Like Resin Instruction

1. The Product Description

EC51 is an ABS-like resin that can achieve fast printing. It supports 0.05-0.2mm layer height printing, and the mechanical strength of the print is stronger than that of conventional resins. This resin has a high printing success rate and is very suitable for beginners.

2. Material Properties Data

	METHOD	DATA
Viscosity（25℃）	ASTM:D4212-10	407mpa.s
Shore Hardness	ASTM:D2240-05	88-93D
Tensile Strength	ASTM: D638-14	42-54MPa
Flexural Strength	ASTM: D790-10	59-62MPa
Flexural Modulus	ASTM: D790-10	1.8-2.2GPa
Notched IZOD	ASTM:D256-10	10.31J/m
Elongation at Break	ASTM: D638-14	8-11%

3. Printing

Use the standard resin settings of the printer brand you successfully printed as the "Standard Settings" (**25-30°C**), otherwise, use the default standard resin settings of the printer (or slicer) as the "Standard Settings". Then follow the following method to set the settings of LITLIQ resin according to the "Standard Settings". Recommended layer height: 0.1mm or 0.15mm.

	Standard Settings	EC51 Settings	EC51 Settings	EC51 Settings	EC51 Settings
Layer Height(mm)	50	50	100	150	200
Bottom Exposure Time(s)	A	1*A	1.2*A	1.5*A	1.8*A
Exposure Time(s)	B	0.75*B	1.4*B	1.8*B	2.1*B
Light-off Delay (s)	D	D+1	D+1	D+1	D+1

Bottom Lift Distance(mm)	E	E	E	E	E
Lifting Distance(mm)	F	F	F	F	F
Bottom Lift Speed (mm/min)	G	G	G	G	G
Lifting Speed (mm/min)	H	H	H	H	H
Retract Speed (mm/min)	I	I	I	I	I

Note:

a. When the room temperature during printing is **18℃-24℃**, change the settings as follows:

Bottom exposure time: (EC51 settings) +15%

Normal exposure time: (EC51 settings) +15%

Light-off Delay time: (EC51 settings) +1s

*The calculation of the above printing parameters is based on the experimental results of the LITLIQ laboratory and is for reference only

4.Cleaning and Post-curing

Cleaning: You can use the ethanol(concentration≥95%), or IPA to clean for less than 1min. After cleaning, use compressed air to dry the prints.

Post-curing: If you use a post-curing box with a power of 40W, our recommended post-curing time is about 15mins (Adjust the post-curing time according to the power of the post-curing box, the greater the power, the shorter the time).

Attentions:

a. Too long post-curing time will make the resin prints easy to warping, hard and brittle.

b. The resin prints will be fragile after post-curing. It is not recommended to apply force to the prints immediately. Just need to wait for a while until the internal stress of the prints is completely released.