



User Guide for Tenacious

Tenacious is developed to be a resin with excellent impact resistance. It can be flexible but also a lot of strength, especially when printed thick. While it does not have the same level of hardness/resilience as other resins, it still can capture decent amount of details.

And it should not stick up user's work environment.

Due to higher polymer content for its outstanding mechanical properties, the ideal printing condition for Tenacious is over 25C.

If user can maintain a resin temperature of 30C, the printing time could be further reduced.

Check out recommended support settings if you have print failures

Recommendation	Resin Temperature: 25-35C	Bottom Temperature: 20-28C
Prints	15 (s)	15 (s)
Layer Height	0.05 mm	0.05 mm
Prints	4 (80 s)	4 (80 s)
Phenolphthalein	15s	15s
EPA-X1	50um	4 (80 s)
EPA-X1	100um	12 (s)
Shirley	50um	6 (80 s)
Shirley-XL	50um	6 (80 s)
DT	50um	6 (80 s)
Inkspire	50um	15 (s)
Mooney	50um	6 (80 s)

* see below for detail settings on lift distance

Inkspire does not specify its light output, one user told us it is very closely to Photon

"If you have info on machines with no print data, please contact us so your fellow users can print as well"

Phenolphthalein settings	Resin	Print	Advanced
Layer Height	0.05 mm	Bottom Lift Distance: 8 mm	
Bottom Layer Count	6	Lifting Distance: 8 mm	
Exposure Time	12 s	Bottom Lift Speed: 32 mm/min	
Bottom Exposure Time	50 s	Lifting Speed: 48 mm/min	
Light-off Delay	0 s	Retract Speed: 150 mm/min	
Bottom Light-off Delay	0 s		

Before Printing

It is a good practice to mix resin and expose the bottom of the vat to air before printing. This replenish oxygen in the vat and helps reduce peel force.

It would also ensure print consistency if user can get the initial resin temperature above 25 and keep the environmental temperature above 25 C

Recommended best support settings:

Tenacious has the most impact resistance of all the Siraya Tech resins and thus has the most flexibility. This means it less thicker support to print well.

Depending on the printer, you may want to check out the Bu recommended support setting as a starting point. It is best to print no less than 80um for this resin.

Tenacious Support recommendation: Tenacious has the more flexibility of all our resins. Make sure the support tip diameter is 1.2mm for larger prints with a depth of 0.5mm. See more full settings recommended <https://www.siraya-tech.com/files/2023/08/20230827-180641>

Cleaning:

Use a painter brush (or any brush made with hair) remove excess resins on the printed part with Use 95% concentrated Ethanol (preferred) or IPA to clean. Some form of medicine alcohol work but make sure it does not contain acetone.

Do not submerge the parts in alcohol for more than 30 seconds. After 2-3 minutes of cleaning action, remove alcohol with a hair dryer or air blower. For complex part with lot cavities, it may be a good idea to clean multiple times.

User can check by touching the dried surface of the part to see if it is still sticky. If the dried surface is still sticky, wash some more and dry again.

Post Curing:

Tenacious reached its optimal strength when the printed part is post-cured with UV light and cure for about 25 minutes.

Make sure resin is completely cleaned off and there is not alcohol left on the print before curing. Curing by submerging object in water will significantly increase curing efficiency.

Mechanical Properties

Shore D 85

Young's Modulus: 2400Mpa

Young's Modulus: 500Mpa

Elongation At Break: 50%

Heat Deflection Temperature: 60C

mds

https://www.siraya-3d.com/open?file=lv_baNGs_6mm70C2x2mm30P30m20u2