



## User Guide for Sculpt (For Sculpt only, not for Sculpt Ultra)

[For Sculpt - Ultra resin user guide, click here:](#)

[For other resin user guides, please visit https://siraya.tech/support/section](#)

Sculpt is developed to be as the go-to resin for model makers with high hardness, great surface finish, excellent resolution and high temperature resistance at 180C

Not only prints made with Sculpt is easy to get great looks with minimal post-processing effort. The htemp feature allows Sculpt be used to make vulcanized rubber molds or to be printed as mold.

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

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

It is recommended to shake Sculpt bottle vigorously before pouring

### \* Important, before printing Sculpt

Sculpt has that dark grey colors that model makers love, and we have already seen some great prints. However, it is also one of the few Siraya Tech resin that has heavy pigments, and it will settle after a long time. To get the best results out of Sculpt, SHAKE HARD (applies to all resins with pigments)

To do it correctly to shake that bottle for 20-30s before use. Stir up the resins that is already in the vat before each print. And if you just received Sculpt, before opening it up for the first time, turn it upside down for a minute (submerged in warm water is even better) and then shake for another minute or two to make sure you get a great mix.

If you want to take it to next level, throw a small metal ball in there and shake, the object will significantly increase the efficiency of mixing pigments and resins.

## Please download profiles base for Elegoo, Anycubic, Phrozen, Peopoly, EPAX, Creality

[https://drive.google.com/drive/folders/1eCz4\\_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing](https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing)

### Exposure: Sculpt Grey

Recommended		Resin Temperature 25-35C			Room temperature 20-28C			Note
Printer	Layer Height	Exposure (s)	# of Initial Layers	Exposure for Init Layers	Exposure (s)	# of Initial Layers	Exposure for Init Layers	
Photon	50um	18 (s)	4	80 S	18 (s)		6 90 s	
Photon Mono		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						
Photon Mono X		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						
Shuffle	50um	Use TR250 profil	<a href="https://www.dropbox.com/s/v7puaea58scxewr/profile_phrozen-tr250-50um-shuffle_2018-12-06.json?dl=1">https://www.dropbox.com/s/v7puaea58scxewr/profile_phrozen-tr250-50um-shuffle_2018-12-06.json?dl=1</a>					
Shuffle XL	50um	Use TR250 profil	<a href="https://www.dropbox.com/s/xinbughp5clvq7/profile_phrozen-tr250-50um-shuffle-xl_2018-12-06.json?dl=1">https://www.dropbox.com/s/xinbughp5clvq7/profile_phrozen-tr250-50um-shuffle-xl_2018-12-06.json?dl=1</a>					
EPAX X1	50um	14 (s)	4	60 s	14 (s)		6 75 s	
Elegoo Mars	50um	14 (s)	4	60 s	14 (s)		6 75 s	
Mars 2 Pro		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						
Mars 3		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						
Saturn		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						
Sonic Mini 4K		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						
Might 4K		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						
Mega 8K		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						
D7	50um				15 (s)		5 90 s	
Inkspire	50um				18 (s)		6 90 s	Inkspire does not specify its light output, one user told us it is very closely to Photon
Moonray		Moonray Ortho Clear Resin setting works well.						
		100um 5 sec 75um 4 sec 50um 3.5 sec 25um 2.8 sec 10um 2.5 sec						
	50um	- LED power 250 (default) - First layer for all 12sec/ first 3 layers (default amount). - Slow setting for Lift speed - 8mm lift height is safest and allow time resin to flow back (they only allow you to pick from 3.8, and 15mm height...which sucks...I'd like 6mm if I could. - Coodown between layers on auto (smaller prints i do 2sec to speed things up) - Supports point(head) size no less than 1mm, but 1.5 is recommended with 2mm shaft.						
Slash								
Peopoly Printers		<a href="https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing">Where to find printer profiles: https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=sharing</a>						

### Exposure: Sculpt Clear

Recommended		Resin Temperature 25-35C			Room temperature 20-25C			Note
Printer	Layer Height	Exposure (s)	# of Initial Layers	Exposure for Init Layers	Exposure (s)	# of Initial Layers	Exposure for Init Layers	
Photon	50um				11(s)		6 60 s	
Peopoly Phenom	50um				12s		6 60 s	Use Peopoly Deft Profile to start
EPA X1	50um				8 (s)		6 50 s	
Shuffle	50um				7.5(s)		5 60 s	
Shuffle XL	50um				11(s)		5 75 s	
Phrozen Transform	50um				8(s)		5 60 s	due to variation in light system in Transform, best to calibrate your resin for your machine in your environment using this ht

### 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.

**Sculpt especially benefit from mixing because it has pigments and may settle over time**

It would also ensure print consistency if user can get the initial resin temperature above 25 and keep the environmental temperature above 20 C

Cleaning:

Use a painter brush (or any brush made with hair) remove excess resins on the printed part with Use 95% concentrated Ethanol or IPA to clean.

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 lots cavities, it may be a good idea to clean/dry 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.

**Sanding is easy with Sculpt. Use 1000 grit sand paper with a bit of mineral oil or water. Mineral oil adds lusters**

**Post Curing:**

Sculpt reached its optimal strength when the printed part is post-cured with UV after cleaned. Use 395-405nm UV light and cure for about 15 minutes.

Make sure resin is completely cleaned off and there is not alcohol left (it needs to be dry) on the print before curing.

Best postprocessing steps: Postcuring without water but in heated chamber for 30 minutes at 75°C. If user does not have such equipment, user could postcure for 30 minutes first and then put in an oven at 75°C for another 30 minutes

## Mold Release

It is a good idea to use mold release to help remove injected material for injection mold applications.

Some of the releases and coatings that has worked for Sculpt Ultra users

<https://www.amazon.com/SLIDE-HI-TEMP-release-lubricant-Nitride/dp/B004RFKJ3C>

<https://www.amazon.com/Rust-Oleum-248904-Paint-Spray-12-Ounce/dp/B003CT4AKM>

<https://specialtyresin.com/product/release-pro-1628>

Shore Hardness (D)	90D
Tensile Stress at Break (MPa)	35
IZOD Impact (Notched, J/m)	-
HDt at 0.455 MPa (°C)	180
Elongation at Break (%)	5
Young's Modulus (MPa)	3500
Liquid Density (g/cm <sup>3</sup> )	1.13
Viscosity (cps at 25c)	650

<b>MSDS</b>	<a href="https://drive.google.com/open?id=1LLgV7orTDDU5vOMhUIQkvX2dLjG8wAJu">https://drive.google.com/open?id=1LLgV7orTDDU5vOMhUIQkvX2dLjG8wAJu</a>
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TDS	<a href="https://drive.google.com/file/d/13S9Z4-Q77CzyBlzLi-l6QyzlwMIRtQN4/view?usp=drive_link">https://drive.google.com/file/d/13S9Z4-Q77CzyBlzLi-l6QyzlwMIRtQN4/view?usp=drive_link</a>
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