SIRAYA Tech

User Guide for Craft - Ultra Clear

For other resin user guides, please visit https://siraya.tech support section

The Craft – Clear resin is ideal for applications that require minimal yellow and easy to print.
resin can be activated with UV light, Sunlight or even flashlights from smartphones.

For prints that are solid piece, it is important to consider the process of removing bubble. More detilas below

There is no need to shake Craft - Clear resin before printing. In fact, shaking and mixing this resin too much may cause bubble issues for applications.

The ideal printing condition for Craft is over 25C as it improves curing speed and lowers viscosity.

Best print with recommended support setting, see below

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

https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHHO?usp=

Exposure Setting

	Recommended	Resin Temperture 25-35C		
Printer	Layer Height	Exposure (s)	# of Initial Layers	Exposure for Init Layers
Photon	50um	12 (s)	4	60 s
Mars 2 Pro	50um	2s	5	25
Mono X	50um	2s	5	25
Shuffle	50um			
Shuffle XL	50um			
Mars 2 Pro	50um	2s	5	25
Mars	50um	9.5 (s)	4	55 s
Photon Mono	50um	2s	5	25
Mono X	50um	2s	5	25

Bubbles

Minimizing Bubble is critical for applications that are thick and requite see thru. There are multiple ways to reduce and remove bubbles.

1. There is no need to shake the resin before printing. This can minize bubble
2. Pour using the wall of the vat instead directly to the base of vat can reduce the amount of bubbles from pouring
3. Let resin sit for 30 minutes to let the bubble out
4. Warm up the resin slight to help bubble escape. You can do that by warming the resin bottle in a warm water for 10 minutes before pouring
5. To guarantee removable of bubble, professional use vaccum chamber. This is not always needed, especially if your application does not have large single solid piece print with no hollowing.

Here is a good video for remove and reduce bubble: https://www.youtube.com/watch?v=7B93dS3NSFk

Recommend best support settings:

We recommend medium preset support setting in chitubox for smaller prints. Heavy support for large prints on large priners

If you don't use chitubox, at least download a copy and see the detail settings for each preset and copy them over to your software of choice

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 methnol should 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 lots cavities, it may be a good idea to clean/dry multiple times.

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

Post Curing:

Craft reached its optimal strength when the printed part is post-cured with UV after cleaned. Use 405nm UV light and cure for about 2 minutes.

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

Please do not overcure as you can still get yellowing if print receives too much UV light. All plastics / resins yellow when it receive UV light exceeding its threshold

Reducing / Removing Yellow

1. Minimize Post UV Curing
2. Place cured print in hot water (50-70C) for 20 minutes can help removing yellowing.
   This is a good reference : https://siraya.tech/blogs/news/how-to-reduce-yellowing-in-a-print-especially-fast-white
3. seal the print in coating to prevent further further UV yellowing. Some users even skip postcuring and goes straight to clear coating and allow natural UV light to slowly post cure the print
4. Repeated exposure in the vat will cause all resins to slowly turn yellow, including Craft - Clear. Therefore, it is best to only use what is needed without putting too much resin in the vat.

Transparency

Like any clear resin, prints made with Craft will have a foggy translucent look right after cleaning and post curing.
This is due to layer lines from the printing process that refract light and create foggyness

To restorn the clear look, there are two approaches

Sanding — This is good if the object has lots flat surface. For example lens. Here is a video on how to sand
https://www.youtube.com/watch?v=Ur74MgEGGSM

Clear Coating — There are many types and here are some used by our users:
1. https://www.amazon.com/Krylon-K01305-Coatings-11-Ounce-UV-Resistant/dp/B00397STRW
2. https://www.amazon.com/Hobby-88ml-Premium-Topcoat-B-603/dp/B01MXTZVQ2

You can learn how to apply here:
https://www.youtube.com/watch?v=nvNXCyDyTTI

Mechanical Properties

Shore Hardness (D)	82D
Tensile Stress at Break (MPa)	38
IZOD Impact (Notched, J/m)	25
HDT at 0.455 MPa (°C)	75
Elongation at Break (%)	6
Young's Modulus (MPa)	1200

MSDS https://drive.google.com/drive/folders/1Qi5ZsZ2Uj7g9vWapm4tGyiTgGuVUBaaI

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