



Shake the bottle and mix the resin in the vat before start printing!

User Guide for Cast

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

This guide is for both Cast Purple and Cast True Blue

Cast is an affordable castable resin designed for lost wax method. Below is the recommended print setting, cleaning, curing and burn out recommendation.

We like to thank many users, including VOG (<https://www.youtube.com/watch?v=mdHpgwGPzcE>) to help each other print and cast well.

The ideal printing temperature for Cast is between 25-35C (resin temperature).

Cast is designed for MSLA printer in mind. It can work in DLP and laser SLA printer but you would need FEP film based vat. Since it is mostly for small jewellery, use the smallest build volume printer for printing

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-jfBLp4L9mKYebY90lfHfHO?usp=](https://drive.google.com/drive/folders/1eCz4_dc0fT-jfBLp4L9mKYebY90lfHfHO?usp=sharing)

Exposure:

Printer	Recommended Layer Height	Resin Temperature 25-35C			Room temperature 20-25C			Note
		Exposure (s)	# of Initial Layers	Exposure for Init Layers	Exposure (s)	# of Initial Layers	Exposure for Init Layers	
Photon	50um	18 (s)	5	80s	18 (s)	5	80s	
EPA X1	50um	15 (s)	5	65s	15 (s)	5	65s	
Photon S	50um	15 (s)	5	65s	15 (s)	5	65s	
Mars	50um	15 (s)	5	65s	15 (s)	5	65s	
Mars 2 Pro	50um	4s	5	35s	4s	5	35s	
Mono	50um	3.2s	5	30s	3.2s	5	30s	
Sonic Min 4K	50um	4.6s	5	40s	4.6s	5	40s	

Please Keet Lift Speed under 50mm/min for Cast resin no matter what printer you use.

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.

Dry as quickly as one can once the print is cleaned with compressed air

Surface should be matte, if you see shiny spots, repeat cleaning on those spots.

AVOID USING WASH AND CURE ALL IN ONE MACHINE

Post Curing:

Make sure print is completely dry before proceeding.

It is important to fully cure Cast to ensure clean burnout.

It is also important to ensure print does not absorb moisture as it may also affect burnout results

We recommend putting print in glycerine to speed up curing without getting water on the print.

Curing time varies with light fixture but most likely to be over 10 minutes and longer.

AVOID USING WASH AND CURE ALL IN ONE MACHINE

Fully Cured Print Should feel hard and a bit brittle

Investment and burn out recommendation

Our users have reported successes with Plasticast® investment by Ransom & Randolph

<https://www.ransom-randolph.com/plasticast>

Recommendend Burn out schedule can be found here:

https://www.ransom-randolph.com/_files/ugd/cc5f22_902ad781b4e74bf3b3d55bff34f7fe6c.pdf

Some user may have hard time finding Plasticast, here is an alternative found in UK and recommended by VOG

<https://www.srs-ltd.co.uk/products/investment-powder/classic>

MSDS for Cast Resin

https://drive.google.com/file/d/1L_SanXBseVcXb8rWoZISSRgoiCXcRK3i/view?usp=sharing

Cast Purple Mechanical Properties

Shore D 70

Tensile Strength 20Mpa

Young's Modulus 600Mpa

Elongation At Break: 5%

Viscosity:	300cps
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Heat Deflection Temperature: 50C

Shrinkage	6% per volume
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Cast True Blue Mechanical Properties

Shore D 65

Tensile Strength 20Mpa

Young's Modulus 600Mpa

Elongation At Break: 4%

Viscosity: 300cps

Heat Deflection Temperature: 50C

Shrinkage 6% per volume

Casting resins and waxes have a Specific Gravity of 1, whereas gold...

Gold Specific Gravity

Gold Type S.G.

24k Gold 19.32

18K Green 15.9

18K Yellow 15.58

18K White 14.64

18K Red 15.18

14K Yellow 13.07

14K White 12.61

14K Red 13.26

10K Green 11.03

10K Yellow 11.57

10K White 11.07

10K Red 11.59

Silver 10.49

Take the volume in ml from Slicers like Chuitubox Lychee and Vlare, divide by 1000 to get the weight of the model in wax and then multiply by the specific gravity for the gold you want to use and you'll get a rough estimate of the weight of gold