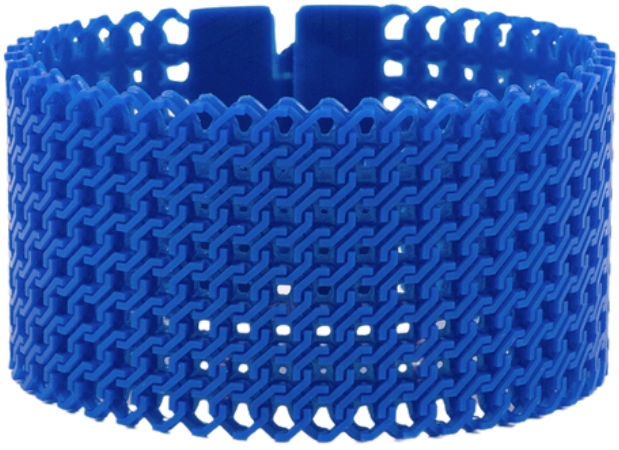
Siraya Tech

Technical Data Sheet

Siraya Tech Cast Castable Resin

Purple / True Blue / Royal Blue



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Product Introduction

Cast Castable Resin

Key Features

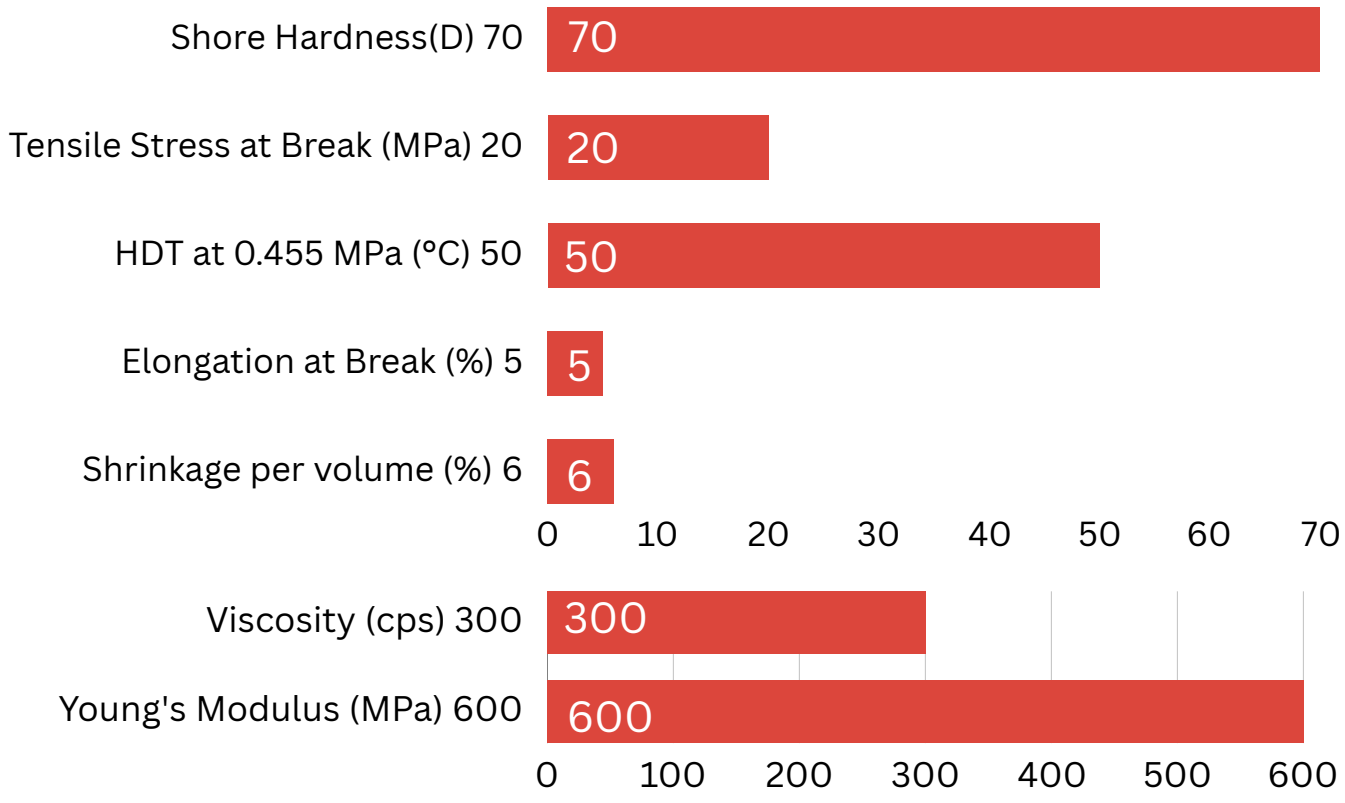
- Easy burning ensures clean and efficient burnout for optimal results
- High resolution and ease of printing deliver detailed and accurate results
- Ideal for jewelry making, dental applications, and small metal parts.
- Works with commonly available investments

Application:

- Dental models
- Jewelry
- Small Metal Engineering parts

Mechanical Properties

- **Cast Purple**



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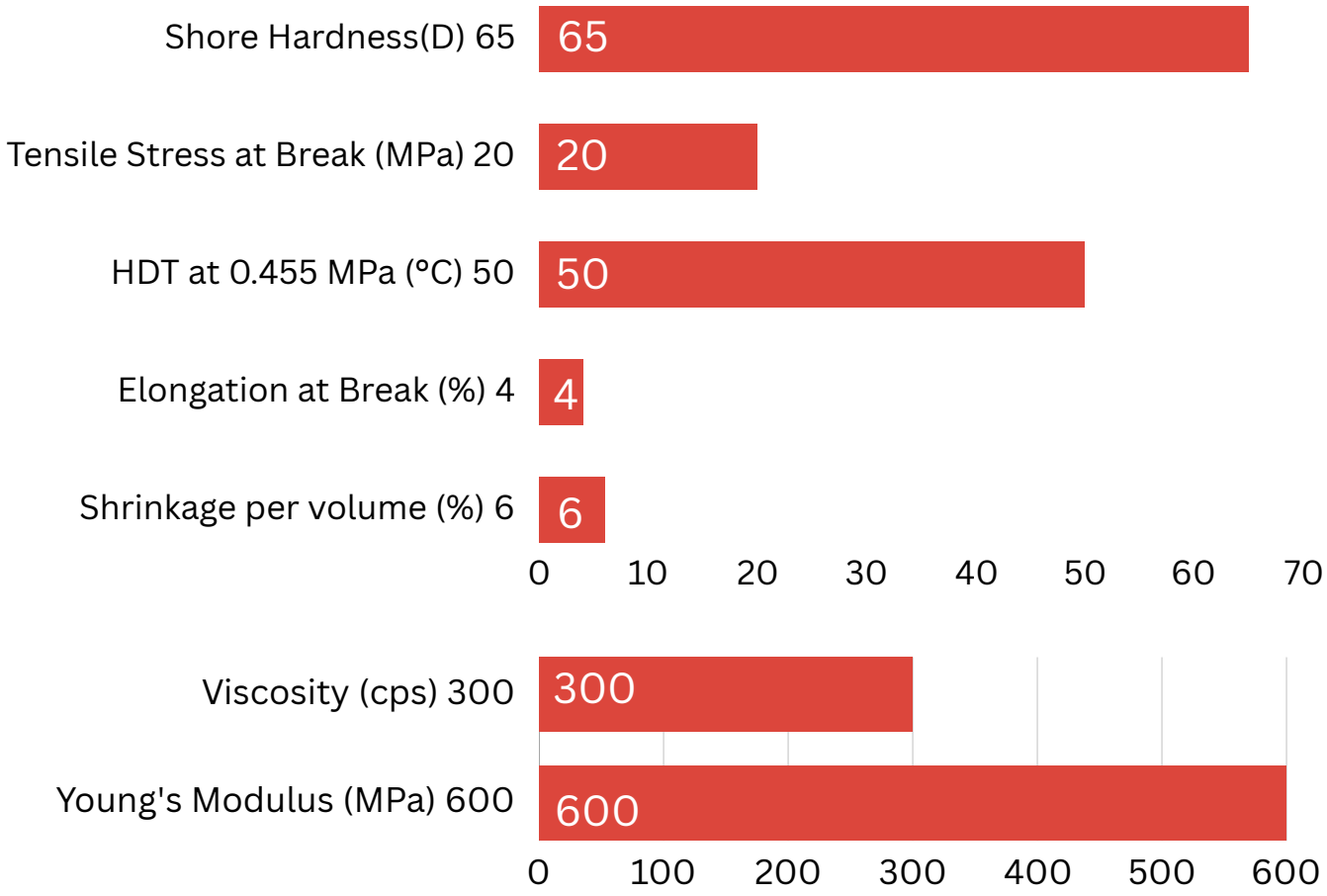
Product Introduction

- **Cast True Blue/ Royal Blue**



User guide for Cast resin

Cast is an affordable castable resin designed for lost wax method. Please shake the bottle and mix the resin in the vat before start printing!

We like to thank many users, including VOG (https://www.youtube.com/watch?v=7MDl6ZeTrME) to help each other print and cast well.

SIRAYA Tech

Work Flow

Printing

Cast resin from Siraya Tech is a versatile 3D printing material with exceptional features. It is castable, easy to burn, and easy to print with high resolution. These features make it ideal for a wide range of applications, including Jewelry and Crown Casting.

To achieve optimal results with Cast Castable resin, you need to use the appropriate slicer profiles for your printer model and software. You can download the slicer profiles for Chitubox and Lychee slicers from this link: https://siraya.tech/pages/print-settings-download

Clean

Here are some tips for cleaning your printed parts:

- To remove excess resins from the printed part, we recommend using a painter brush (or any brush made with hair).
- Clean the part with 95% concentrated ethanol (preferred) or IPA, ensuring that the methanol used does not contain acetone.
- After 2-3 minutes of cleaning action, remove the alcohol with a hair dryer or air blower. For complex parts with numerous cavities, it may be advisable to clean and dry multiple times.
- Once the print has been cleaned with compressed air, it should be dried as quickly as possible. The surface should be matte; if any shiny spots are visible, repeat cleaning on those areas.
- It is recommended to avoid using a wash and cure all-in-one machine.

Post Curing

Here are some tips for post-curing your printed parts:

- Prior to proceeding, ensure that the print is completely dry.
- It is of utmost importance to fully cure the cast to ensure a clean burnout.
- Take care to prevent the print from absorbing moisture, as this may adversely affect burnout results.
- It is recommended to place the print in glycerine to expedite the curing process, while avoiding contact with water. The duration of curing time varies depending on the light fixture, but is typically more than 10 minutes.
- It is advised to refrain from using a wash and cure all-in-one machine. A fully cured print should exhibit a hard and somewhat brittle texture.

Investment and Burn out

Investment

- Our users have reported successes with Plasticast® investment by Ransom & Randolph – https://www.ransom-randolph.com/plasticast.
- Jewelry Plaster
  a. Plasticast investment is ideal for investing and burnout of plastic or wax/plastic patterns. It offers high expansion and strength, maintaining mold surface and dimensional integrity. Plasticast provides a smoother, cleaner casting surface and is easy to remove in water.
  b. Some users may have a 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
- Dental Plaster
  a. Our user cast with a product called JPvest. It's a hard investment that allows the expansion of the resin when put it in a hot oven. JPvest provides a faster way for users to cast–https://drive.google.com/drive/folders/19DwwWbP1XrMZy1vWJ29-44WauM8F2HYz

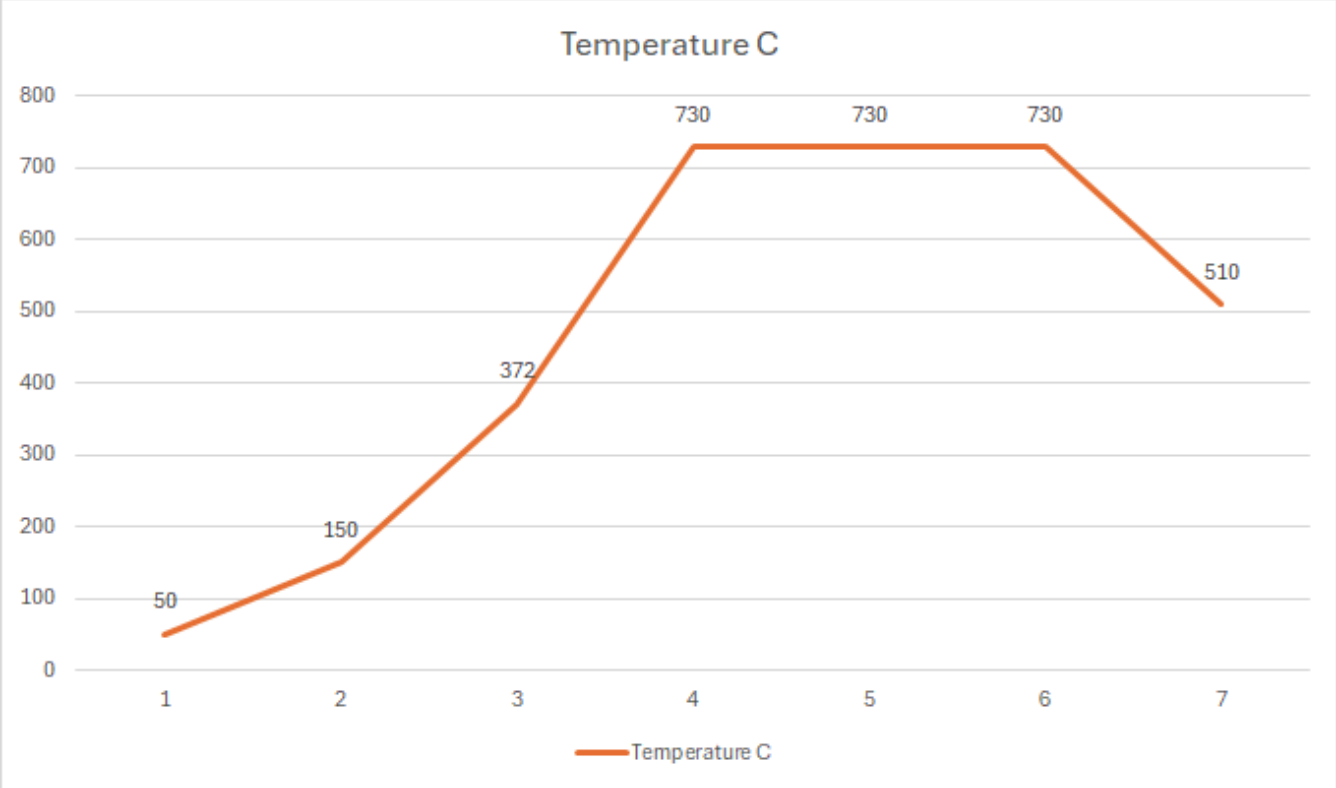
Burning out schedule (For Plasticast Only)

Pattern burnout schedules described are recommendations. Adjustments may be required for various furnace types, flask sizes and oven loading.

		Flask size: up to 3" x 3" (7.6 cm x 7.6 cm)	**Flask size: up to 4" x 6" (10.2 cm x 15.2 cm)**	**Flask size: up to 4" x 8" (10.2 cm x 20.3 cm)**
Water Removal	Ambient to 300°F (150°C) as fast as possible (can be preheated)	Hold 1 hour	Hold 3 hours	Hold 3 hours
Thermal Transition	Raise to 700°F (370°C)	Raise over 1 hour Hold 1 hour	Raise over 2 hours Hold 2 hours	Raise over 2 hours Hold 2 hours
Pattern Removal	Raise to 1350°F (730°C)	Raise over 2 hours Hold 2 hours	Raise over 2 hours Hold 2 hours	Raise over 3 hours Hold 3 hours
	Reduce to casting temperature and allow for stabilization	Hold 1 hour	Hold 2 hours	Hold 2 hours

Note: refer to the mold casting temperatures recommended by your alloy supplier.

Investment and Burn out

Burning out schedule (Tested by Siraya Tech Team)

Time (Hour)	Temperature
0	122°F (50°C)
1	300ºF (150°C)
2	700ºF (371°C)
3	1350ºF (732°C)
4	1350ºF (732°C)
5	1350ºF (732°C)
6	950ºF (510°C)