



**PROTO
RESINS**

DISCOVER OUR MOST DIVERSE LINE OF
PREMIUM CASTABLE RESINS
FOR JEWELRY MANUFACTURING



1. SILKWAX

Designed for professional jewelry manufacturers, SilkWax is a premium castable resin with 80% wax content, crafted to deliver a smooth surface finish and crisp detailing. Ideal for filigree and mid-gauge designs, it offers a casting experience that replicates traditional wax with the added precision of digital printing. SilkWax ensures zero ash, no carbon residue, and no thermal expansion, making it exceptionally reliable for fine jewelry casting.



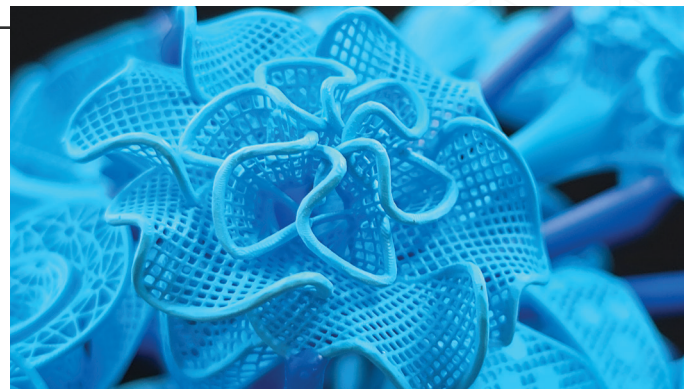
FEATURES:

- Filigree & Fusion Designs
- 80% Wax
- DLP & LCD
- No Shrinkage

		FILIGREE	FUSION	STANDARD	SOLID PARTS	CHAINS
SILKWAX	Printability	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
	Castability	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

PROPERTY	VALUE	STANDARD
Density	1.08 gram/cm3	ASTM D1475-13(2020)
Tensile Strength	11 MPa	ASTM D638-14
Flexural Strength	7.06 MPa	ASTM D790-02
Flexural Modulus	170 MPa	ASTM D790-02
Shore D Hardness	58	ASTM D2240-15(2021)
Viscosity	9.53 Seconds	DIN 53211-4
Color	Sky Blue	-

PRINTING & CASTING RESULTS FOR REFERENCE



INSTRUCTIONS

PRINTING

1. Make sure to Pre-Heat up to 45C the Resin and shake the bottle for 30 seconds before pouring into the Tray.
2. If the Resin is sitting on the tray for longer Periods, Make sure to Mix it with Silicone Spatula Timely.
3. It is a good practice to filter the Resin after every Job.
4. Silkwx requires proper support structures for optimal printing.
It is recommended to use supports with circular contact points, such as those provided by BelSupports, to prevent surface damage during removal. Ensure the spacing between supports is not too wide to maintain stability and avoid print failures.
5. **For LCD Users:** It is suggested to use PFA or FEP films with a thickness of 127 microns or less

WASHING INSTRUCTIONS

1. Use 99% Ethyl Alcohol for the initial cleaning of printed models to ensure effective resin removal.
2. Rinse first time with dirty alcohol then dry with compress air.
3. Rinse second time with fresh alcohol then dry with compress air.

Post Processing

1. Soak the dried models in fresh 99% Ethyl Alcohol for 5 minutes, followed by another round of drying with compressed air.
2. Post-cure the cleaned and dried models under UV light for 2-5 minutes to ensure full polymerization. In case of Ultra Filigree designs 2 Minutes would be enough. For higher gauges UV curing time can be increased.

INVESTMENT MIXING

Proto Resins recommends the following Investment Powders:

- | | |
|------------------------------|-------------------------------------|
| 1. Prestige Optima by Certis | 2. Ransom and Rundolph's Plasticast |
| 3. G-Mix by Gesswein | 4. X-Vest by Bluecast |

Investing and casting from resin prints can be tricky, to say the least. The following recommendations are meant to assist our customers in obtaining the best possible casting results when investing and casting from resin prints.

It is recommended to use a 37/100 water to powder ratio for investing large, thicker prints, and a 38/100 ratio for lighter, smaller prints. Using more water will create a weaker investment mold for burning out resin.

After investing is completed, and before proceeding with burnout, allow invested flasks to sit (bench-set) undisturbed in a vibration-free area for a minimum of 3 to 4 hours (depending on flask size). (3 hours for flask sizes less than 3" x 4" (76.2 x 101.6 mm) and up to 4 hours for larger flask sizes. Drying out the investment and removing too much moisture can lead to mold cracks and metal flashing.

It is advised to use Investment Brands that are exclusive for Resin Casting and pay special attention to the manufacturer's instructions as well.

SUGGESTED BURNOUTS

BURNOUT CYCLE #1 Recommended for flask sizes less than 50.8 X 76.2mm (2" X 3")

1. Load flask into room temp. Oven, and ramp to 150C. (302F.) over 30 minutes.
2. Hold 150C. (302F.) 3 hours.
3. Ramp to 750C. (1382F.) over 3 hours.
4. Hold 750C. (1382F.) 4 hours.
5. Reduce oven to flask temperature For casting.
6. Hold flask temperature For casting 2 hours to stabilize temperature throughout the mold.
7. Cast.

BURNOUT CYCLE #2 Recommended for flask sizes larger than 50.8 X 76.2mm (2" X 3")

1. Load flask into room temperature oven and ramp to 110C. (230F.) over thirty (30) minutes.
2. Hold 110C. (230F.) four (3) hours.
3. Ramp to 450C. (842F.) over one (1) hour, sixty (60) minutes.
4. Hold 450C. (842F.) two (2) hours.
5. Ramp to 780C. (1436F.) over two (2) hours.
6. Hold 780C. (1436F.) four (4) hours.
7. Reduce temperature to desired flask temperature for casting.
8. Hold flask temperature for casting two (2) hours.
9. CAST.

RAPID BURNOUT (For use with small flasks less than 50.8 X 50.8mm. (2 X 2") with one, or 2 prints on tree.

1. Load flasks into oven pre-heated to 150C. (302F.).
2. Hold 150C. (302F.) two (2) hours .
3. Ramp to 450C. (842F.) over one (1) hour.
4. Hold 450C. 842F.) 30 minutes.
5. Ramp to 780C. (1436F.) over one (1) hour.
6. Hold 780C. (1436F.) 2 -3 hours (depending on thickness of design).
7. Reduce oven to flask temperature for casting .
8. Hold flask temperature for casting one hour.
9. CAST.

RAPID BURNOUT (For use with flask sizes less than 3" X 4") Observe recommended bench-set time

1. Load flasks into oven pre-heated to 550C. (1022F).
2. Hold 550C. (1022F.) one (1) hour.
3. Increase temperature to 780C. (1436F.) within 2 hours.
4. Hold 780C. (1436F.) four (4) hours.
5. Reduce temperature to desired flask temperature for casting.
6. Hold flask temperature for casting one hour.
7. CAST.

Ultra 4 Hour RAPID BURNOUT

1. Ramp to 720 C.
2. Hold for 1-2 Hours.
3. Ramp down to casting temperature and hold for 1-2 Hours.
4. Cast.