BLUECAST X-WAX FILIGREE®

X-Wax Filigree was developed for filigree jewelry that requires absolute dimensional stability, accuracy, ease of printing, smooth surfaces and casting.

PRODUCT FEATURES

X-Wax Filigree is a 3d resin for jewelry developed for filigree models that require absolute dimensional stability, accuracy, ease of printing, smooth surfaces and casting. X-Wax Filigree complements, rather than replaces, our standard X-Wax. Each resin serves unique purposes and excels in different applications. Our classic X-Wax, with its 80% real castable wax base, delivers unparalleled castability. Meanwhile, X-Wax Filigree is engineered for superior printability, making it ideal for jewelry featuring delicate thicknesses and lightweight designs. Its exceptional smooth surface and precision make X-Wax Filigree a game-changer for micro-casting intricate Arabic and filigree patterns.

Key Features

- Ideal for printing service: This castable resin yields models with superior durability compared to wax models, allowing for easy, secure bulk shipping without special handling.

- Effortless Support Removal: Remove supports with ease! They detach cleanly, leaving your printed models with untouched, smooth surfaces.

- Precision Details: Engineered to prevent resin bleed, ensuring exceptionally crisp details and clean edges.

- Universal Print Compatibility: Engineered for full compatibility with all LCD and DLP 3D printing platforms.

- Improved user experience: Low odor and minimal fumes during both printing and burnout stages.

- Streamlined post-processing: Just a quick alcohol rinse is needed for clean results. A brief UV post-cure is Mandatory for optimal casting quality.

- Safe to use: Made from non-hazardous materials for a safer working environment.

- Metal Save delivers an exceptional surface quality that's ready to shine with hardly any polishing. Get stunning detail and a top-tier finish, effortlessly.

Storage note: As a predominantly wax-based material, X-Wax Filigree may solidify during storage.

X-WAX FILIGREE: THE MOST ADVANCED CASTABLE RESIN FOR FILIGREE DESIGNS

X-Wax Filigree represents a groundbreaking innovation as the world's first resin that can truly be called "real wax for 3D printing." This is more than just a marketing statement—it's a transformative solution that allows jewelers, artisans, and designers to effortlessly create extremely fine and detailed models with unparalleled ease. Moving beyond traditional wax printing technologies, X-Wax Filigree facilitates the production of ultra-thin, delicate structures without the necessity of costly machinery.

Engineered specifically for intricate and lightweight jewelry designs, X-Wax Filigree demonstrates exceptional capability in printing ultra-fine geometries, such as elaborate filigree patterns, micro settings, and delicate ring bands. Its superior dimensional stability and sharp resolution render it perfect for Arabic and other designs demanding high levels of detail.

Although X-Wax Filigree also provides dependable castability, its primary advantage lies in its remarkable printability and precision for thin-walled and lightweight items. If ultimate castability is your priority, X-Wax Standard stands as the superior choice. The high wax content does not negatively impact the rigidity or structural integrity during printing, and a short UV post-cure can strengthen delicate models without losing intricate details or accuracy.

MAIN ADVANTAGES AND DISVANTAGES OF X-WAX CASTABLE RESIN

With X-Filigree, you're able to create lightweight models and filigree designs thanks to a durable resin enriched with a high concentration of true wax.

PRO:

- **Perfect for print extreme filigree patterns:** no risk of banding, deformation and cracks.
- **Enhanced Strength**: X-Wax Filigree models offer superior durability compared to wax-printed alternatives.
- **Metal Save:** Achieve smoother, more detailed surfaces and a superior final finish with minimal polishing required.
- **Low initial investment**: accessible even for those with a limited budget.
- **Affordable material cost**: a cost-effective option.
- **Printing speed up to 5 times faster** than traditional wax printers.
- **Optimized Material Use: With minimal support requirements, no build plate needed, and simple cleanup.**

Engineered for intricate and lightweight jewelry, X-Wax Filigree excels at printing ultra-fine geometries, including elaborate filigree patterns, micro settings, and delicate ring bands. Its superior dimensional stability and sharp resolution make it perfect for Arabic and other designs demanding high levels of detail, rigidity, and robustness.

QUICK START GUIDE FOR LCD PRINTERS

Following informations are suitable only for X-Wax Filigree castable resin and will not apply to other BlueCast products.

While X-Wax Filigree provides reliable castability, its core strength is its exceptional printability and precision for lightweight, thin-walled items. For those prioritizing ultimate castability, X-Wax Standard is still your best bet if you are looking for wax castability grade.

Crucially, the high wax content in X-Wax Filigree doesn't compromise rigidity or structural integrity during printing. A quick UV post-cure further enhances the strength of delicate models, all while preserving intricate details and accuracy.

Baseline Printing Settings for Monochrome LCD Printers

Layer Height – 0.03 mm
Bottom Layer count – 10
Bottom Exposure Time – 30
Layer Exposure Time – 8.5 s
Rest Time Before Print – 1 s
Bottom layer speeds – 50 mm/min
layer speeds – 150 mm/min

For accurate printing parameters, please visit:
https://onedrive.live.com/?id=791D0F8C763D19D0%2127074&cid=791D0F8C763D19D0

Printing Preparation

The print preparation process is very similar to that of classic X-Wax.

As it is made primarily of wax, X-Wax Filigree can solidify during storage. Here's how to prepare it:

1. Before opening the bottle, it is necessary to warm the product for 5 minutes at a temperature between 30 and 40 degrees Celsius.

PAY ATTENTION, heating the resin above 60 degrees Celsius can irreversibly damage it. The manufacturer is not responsible for an incorrect use of the product.

2. Shake the bottle vigorously for about 1 minute to ensure optimal mixing.

3. Use PFA films with a thickness of 127 microns or less to maximize the resolution of modern 3D printers.

4. For printers that have a vat tilt mechanism, it is suggested to use an ACF film.

5. Ensure the printer is placed in an environment with temperatures between 18/20°C and 45°C. THE OPTIMAL OPERATING RANGE IS BETWEEN 25°C and 35°C

6. To prevent wax solidification during printing, it is recommended to use a heated resin tank or a printer with a heated chamber (30° Celsius).

7. There are several ways to warm the bottle before printing. The safest method is to use a baby bottle warmer at a temperature of 40°C or an ultrasonic cleaner.

Storing the closed bottles should be done at a temperature between 10 and 25 degrees Celsius.

A simplified process for superior results

Here's the deal with X-Wax Filigree: it's all about making things easy and fast. After printing, just give it two quick alcohol washes, dry it with cold compressed air, and then hit it with some UV light. No need for complicated glycerin baths or boiling your models. Your UV lamp's power will determine how long it needs to cure.

POST-PRINTING CLEANUP AND TREE PREPARATION

1. Wash the patters in IPA alcohol for 3 minutes.

2. Blow the prints with compressed air to remove excess uncured resin.

3. Perform a second wash in IPA clean alcohol for 2 minutes, then dry the prints again with compressed air.

4. For a more thorough cleaning, you can use 3D wash stations or ultrasonic cleaners.

5. Perform a UV curing cycle of at least 10 minutes: MANDATORY.

6. Allow the models to rest for at least 15-20 minutes before assembling the casting tree.

Helpful Tips

- Heating and properly mixing the resin before printing helps prevent potential adhesion errors to the build plate or other failures.

- If the resin solidifies in the vat, you can liquefy it again using a hair dryer and a silicone spatula.

- Performing a manual leveling of the print platform is crucial if you want to print without rafts and save resin.

Suggested Investment

Extensive testing of X-Wax Filigree castable resin with a diverse range of investment materials for casting has been conducted. The most favorable casting outcomes were observed using Plasticast, Optima Prestige, and SRS Classic at a water/plaster ratio of 37:100, and X-Vest v2 at a water/plaster ratio of 38:100, provided that the flask was allowed to rest for 2 hours prior to the burnout process.

Burnout Cycles

Recomended
Stage 1 – Ramp up from 0°C to 150°C / Hold at 150°C for 2 hours
Stage 2 – Ramp up from 150°C to 730°C / Hold at 730°C for 3 hours
Then cool down to casting temperature

Standard Cycle
Stage 1 – Ramp up from 0°C to 150°C / Hold at 150°C for 2 hours
Stage 2 – Ramp up from 150°C to 450°C / Hold at 450°C for 2 hours
Stage 3 – Ramp up from 450°C to 730°C / Hold at 730°C for 3 hours
Then cool down to casting temperature

Fast Cycle
Stage 1 – Ramp up from 0°C to 750°C / Hold at 750°C for 2 hours
Then cool down to casting temperature

Printing and casting filigrees has never been so easy.

With X-Wax Filigree, BlueCast has established new quality standards for 3D printing in filigree production. This revolutionary castable resin seamlessly combines tradition and innovation, offering designers and artisans an unparalleled tool for creating impeccable models with ease.

This revolutionary resin combines tradition and innovation, offering designers and artisans a unique tool for creating impeccable models with ease. The path to success is clear: join the revolution with X-Wax Filigree.