BLUE CAST X10

PRODUCT FEATURES

- Casting resin based on the experience of BlueCast X5.
- Excellent casting of small engravings both positive and negative.
- Suitable for all jewelry needs: from filigree to medals, as well from chaton settings to signet rings.
- Excellent for stones presetting (improved elasticity).
- No smell.
- Negligible shrinkage (0.8% after 7 days).
- Easy welding with wax.
- Excellent yield of details with all investments. No chemical aggression of the investment during burnout cycle.
- Possible manual refinishing (post cure is needed).
- Monomers absence.
- Extremely detailed.
- Shaded surfaces.
- Burnout cycle improved.
- Suitable for all fast burnout cycles.
- Full burnout also at lower temperature (740°C, flask).
- Excellent dimensional stability in time.

QUICK START GUIDE FOR LCD PRINTERS

Blue Cast LCD/DLP resin is fully compatible with all LCD printers like Phrozen Shuffle, XL, Wahnaho D7, D8, Micromake 2017 L2, EAST Micromake L2, X-CUBE LCD, Vodainfo Tech. LCD, Xayav Model V, etc (405nm _ min. 30 watt LED power), Anycubic and Elegoo machines.

Use a resin tank provided with high quality FEP(FEP 100 OR 127 HD are suggested).

Before use, shake the resin container.

In case of particular climatic conditions (such as in case of room temperature inferior to 20°C) it is suggested to preheat the resin. If the resin has been sitting in the tank, use the putty knife to ensure it is thoroughly mixed.

It is suggested to filter the resin before each use, in order to avoid any damage to LCD screen.

Use the adapt PrimerCat primer to improve the resin adhesion to the platform. Put 2 or 3 drops on the print platform and spread them with the help of a spatula until an invisible and homogeneous film is achieved.

On the LCD printers like Wanaho D7 and Anycubic Photon (30 / 40 watt) start from these settings:

0,05 mm z Resolution

5 bottom layers - exposure time 60 seconds

Other layers - from 12 to 16 seconds (depend on geometry)

Z lift - 5mm

Z lift speed - 40 mm/min

Antialiasing - Off

0,03 mm z Resolution

5 bottom layers - exposure time 50 seconds

Other layers - from 9 to 12 seconds (depend on geometry)

Z lift - 5mm

Z lift speed - 40 mm/min

PRINTING SETTINGS

Phrozen Shuffle

BURN IN LAYER
NUMBERS OF LAYERS: 5
LAYER THICKNESS: 50u
CURE TIME: 70 SEC
WAIT BEFORE PRINT: 5 SEC
WAIT AFTER PRINT: 0.5 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

NORMAL LAYER
LAYER THICKNESS: 50u
CURE TIME: 12 SEC
WAIT BEFORE PRINT: 1.5 SEC
WAIT AFTER PRINT: 0.1 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

MOTOR SPEED 120 u/SEC

Phrozen Shuffle 4K

BURN IN LAYER
NUMBERS OF LAYERS: 5
LAYER THICKNESS: 30u
CURE TIME: 60 SEC
WAIT BEFORE PRINT: 5 SEC
WAIT AFTER PRINT: 0.5 SEC
LIFT AFTER PRINT: 7 mm
WAIT AFRER LIFT: 0.1 SEC

NORMAL LAYER
LAYER THICKNESS: 30u
CURE TIME: 9.5 SEC
WAIT BEFORE PRINT: 0.5 SEC
WAIT AFTER PRINT: 0.1 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

MOTOR SPEED 150 u/SEC

Phrozen Sonic – Sonic / Mini

BURN IN LAYER
NUMBERS OF LAYERS: 6
LAYER THICKNESS: 50u
CURE TIME: 45 SEC
WAIT BEFORE PRINT: 5 SEC
WAIT AFTER PRINT: 0.5 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

NORMAL LAYER
LAYER THICKNESS: 50u
CURE TIME: 2.7 SEC
WAIT BEFORE PRINT: 1.5 SEC
WAIT AFTER PRINT: 0.1 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

MOTOR SPEED 80 u/SEC

Phrozen XL

BURN IN LAYER
NUMBERS OF LAYERS: 5
LAYER THICKNESS: 100u
CURE TIME: 80 SEC
WAIT BEFORE PRINT: 5 SEC
WAIT AFTER PRINT: 0.5 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

NORMAL LAYER
LAYER THICKNESS: 50u
CURE TIME: 10 SEC
WAIT BEFORE PRINT: 1.5 SEC
WAIT AFTER PRINT: 0.1 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

MOTOR SPEED 100 u/SEC

ANYCUBIC PHOTON

LAYER THICKNESS: 0.05 mm
NORMAL EXPOSURE TIME: 15 SEC
OFF TIME: 1.5 SEC
BOTTOM EXPOSURE TIME: 90 SEC
BOTTOM LAYERS OFF TIME: 5 SEC
BOTTOM LAYERS: 7
SUPPORTS: preset medium

ELEGOO MARS

LAYER THICKNESS: 0.05 mm
NORMAL EXPOSURE TIME: 12 SEC
OFF TIME: 1.5 SEC
BOTTOM EXPOSURE TIME: 90 SEC
BOTTOM LAYERS OFF TIME: 5 SEC
BOTTOM LAYERS: 7
Z LIFT DISTANCE: 5 mm
SUPPORTS: preset medium
MOTOR SPEEDS 100 u/SEC

ANYCUBIC PHOTON S

LAYER THICKNESS: 0.05 mm
NORMAL EXPOSURE TIME: 7 SEC
OFF TIME: 3 SEC (don t affect the printing – it is a fake parameters on photon S)
BOTTOM EXPOSURE TIME: 60 SEC
BOTTOM OFF TIME: 5 SEC (don t affect the printing – it is a fake parameters on photon S)
BOTTOM LAYERS: 5
Z LIFT DISTANCE: 5 mm
Z LIFT SPEED: 1.0 mm/S
Z RETRACT SPEED: 0.5 mm/S
SUPPORTS: preset medium

SparkMaker FHD

BURN IN LAYER
NUMBERS OF LAYERS: 8
LAYER THICKNESS: 50u
CURE TIME: 100 SEC
WAIT BEFORE PRINT: 5 SEC
WAIT AFTER PRINT: 0.5 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

NORMAL LAYER
LAYER THICKNESS: 50u
CURE TIME: 16 SEC
WAIT BEFORE PRINT: 1.5 SEC
WAIT AFTER PRINT: 0.1 SEC
LIFT AFTER PRINT: 5 mm
WAIT AFRER LIFT: 0.1 SEC

MOTOR SPEED 100 u/SEC

Zortrax Inkspire

LAYER THICKNESS 50
LAYER EXPOSURE: 10 SEC
BOTTOM LAYER EXPOSURE: 50 SEC

EXPOSURE OFF TIME: 1.5 SEC
BOTTOM LAYERS: 5
ADDITTIONAL SUPPORTS EXPOSURE: 1 SEC
Z LIFT DISTANCE 5
PLATFORM SPEED 90

MOTOR SPEED 90mm/M

Primer is strongly suggested. If you don't have Primercat you can use standard resin as well.

We suggest also to sand your build platform. Sometime they are not perfectly planar. The coating inibite the sticking of oligomer resins based.

If you want improve the details you can use our additive named Sharpener. X10 was made to have extra smooth surfaces. For have crispy details Sharpener is needed.

An HD fep it's also a trick to improve the printing quality and platform adhesion.

PLEASE NOTE THE EXPOSURE TIME CAN CHANGE BY 20% IN ACCORDING TO THE MANUFACTURER LED CALIBRATION, TO THE USED FEP AND TO THE PRINTER EFFICIENCY

QUICK START GUIDE FOR FORMLABS/SLA PRINTERS

Before use, warm / shake the resin container.

Prepare files with an adequate base.

For FORMLABS2, it is suggested to use the castable V2 print profile – FORMLABS 3, it is suggested to use the gray V3 or castable wax print profile - DWS DC 400/600.

In order to improve the adhesion: built base sandpapering, resin heating, raft utilization and primer (or original resin as primer) application are recommended.

POST-PRINTING CLEANUP

Clean the prints by pouring 91%/99% denatured alcohol (IPA) or ethyl alcohol 90%/99% (approximately 1 minute).
Dry and clean the pieces using a can of compressed air for best results.

1) **Casting in house:**
   - UV cure is not necessary.

- It is advisable to realize the investment not over 12 subsequent hours after the print.

2) Casting by service:

If casting is relied on external services:

- Rescale the file model up to +2% before printing;
- Standard cleaning with alcohol and drying with compressed air (as indicated previously).
- UV cure until the model is completely white/cleared.

IMPORTANT TIPS

Check resin tank before EVERY print. BlueCat is not liable for any damage caused to the printer by cracking or leakage of the resin tank.

We recommend printing large rings horizontally.

DO NOT store the resin for more than 48 hours in the resin tank. BlueCast is highly hygroscopic and will absorb moisture from the air. It is advisable to filter the resin after each print cycle and store it in its original container for optimal preservation and to prevent alteration of its characteristics.

Do not store the resin in clear containers, as it is highly light-sensitive and will damage the resin.