C & B MODEL (BEIGE)

User Guideline

Introduction

The below user guidance is for professionals using Crestaform® Dental C & B Model Beige.

Crestaform® Dental C & B Model Beige is optimised for the precise production of crown and bridge working models, including removable dies and implant analogue models, delivering excellent dimensional accuracy, sharp margin lines, and a matt-like surface finish that makes detail inspection effortless. The formulation offers high rigidity and edge stability to withstand sawing, sectioning, and repeated placement of restorations in the laboratory workflow. It is compatible with open-source 385 and 405nm mSLA/LCD & DLP vat-based 3D printers and is also validated on Asiga to ensure reliable performance and repeatable results.

Below, you will find suggested workflow which includes examples of 3D printers and printing parameters. For more technical information please refer to the relevant TDS, visit our website or contact Scott Bader directly at enquiries@scottbader.com.

Health and Safety

The relevant Safety Data Sheet (SDS) can be obtained from your supplier or request through our website.

For more information, please refer to the country specific SDS for advice.

Storage and Disposal

Crestaform® Dental C & B Model Beige should be stored in its original packaging in a dry and dark environment, out of direct light. It is recommended that the storage temperature be between 15°C and 35°C. If the material is not in-use, remove it from vat/tray, filter and return to its original packaging to prevent dust or debris contamination.

The Crestaform® Dental C & B Model Beige must be disposed of in accordance with the local regulations.

For more information, please refer to the country specific SDS for advice.

Printing

Printing should be carried out at room temperature. **Always shake or mix the resin thoroughly before use**. **Failure to do so can result in suboptimal printing and failed prints.** Open the container and pour slowly the appropriate amount of resin into the resin vat/tray. It is recommended to allow the resin to settle for several minutes, ensuring a smooth, bubble-free surface before beginning a print. Once a print has been completed, resin should be removed and filtered back into the original packaging.

The 3D printer examples, and corresponding settings included in this document are for general guidance only. Users should always determine their own optimised setting, according to the requirements of their printer and print file. For advice on this topic, please refer to our website and “Optimising print settings for open-source machines” white paper, which provides instructions on developing printing profiles for different open-source machines, and how to troubleshoot different print failures through adjustment of different printing parameters.

Examples of 3D Printers and Settings

The given values in the table are for printing on open-source LCD 405 nm printers at room temperature. For printing profiles for Asiga machines, please refer to our website. For different layer thickness starting parameters contact us directly at enquiries@scottbader.com or check our white paper.

Printer	Layer Height (µm)	Burn-in Layer Exposure Time (sec)*	Normal Layer Exposure Time (sec)*	Normal Layer XY scaling (%)**	Normal Layer XY compensation/ tolerance (mm)***	Wait Before Print (sec)
Elegoo Mars 4	50	30 – 60	2.0 – 2.5	100.4	-0.03	1.5
	100	50 – 60	3.6 – 4.1	100.4	-0.03	1.5
Elegoo Saturn 3	50	30 – 60	2.0– 2.5	100.4	-0.03	1.5
	100	50 – 60	3.6 – 4.1	100.4	-0.03	1.5
Elegoo Saturn 4 Ultra	50	30 – 60	2.0 – 2.5	100.4	-0.03	1.5
	100	50 – 60	3.6 – 4.1	100.4	-0.03	1.5
Phrozen Sonic Mighty 4K	50	30 – 60	3.0 – 3.5	100.4	-0.03	1.5
	100	50 – 60	5.8 – 6.3	100.4	-0.03	1.5
Phrozen Sonic Mighty 8K	50	30 – 60	2.3 – 2.8	100.4	-0.03	1.5
	100	50 – 60	4.6 – 5.1	100.4	-0.03	1.5
Phrozen Sonic Mega 8KS	50	30 – 60	1.5 – 2.0	100.4	-0.03	1.5
	100	50 – 60	2.9 – 3.4	100.4	-0.03	1.5
Phrozen Sonic LS+ (55%)	50	20 – 40	1.4 – 1.9	100.4	-0.03	1.5
	100	30 – 50	2.9 – 3.4	100.4	-0.03	1.5

* data as per spot cure testing with 80 micron offset

** data as per shrinkage steps testing. Post-cure regime was 30 min UV only in a Formlabs Form Cure.

*** data as per shrinkage steps testing. Post-cure regime was 30 min UV only in a Formlabs Form Cure. If using Chitubox slicer, apply this value to both A and B.

Other suggestions

- If printing directly on the build platform, we recommend applying a Burn-In Layer XY compensation/tolerance of -0.4 – 0.8 mm to prevent formation of an elephant's foot.
- Regarding settings such as lift/retract distance and lift/retract, we recommend using default settings provided for the printer.

For Asiga users (Asiga Max UV385 & 405), material profile can be found at scottbader.com.

Printers Compatibility

Crestaform® C & B Model Beige has been designed to work with any UV LCD & DLP 385 or 405 nm 3D printer, including, but not limited to: Anycubic, Elegoo, Phrozen, Asiga.

General post-processing workflow

The below advice provides a general post-processing workflow for those without prior experience or those not using post-processing workflows recommended by printer manufacturers.

Cleaning

- It is recommended after print to allow resin to drain from parts and platform before removing parts. A plastic scraper can be used to aid in this process.
- Printed parts should be removed carefully from the build platform with a suitable tool.
- At this stage you can carefully remove any supports (if applicable).
- It is recommended that isopropanol (IPA) be used when cleaning prints.
- It is recommended that a two-step IPA wash cycle is used, rinsing with reused IPA first to remove the bulk of the residual resin followed by a clean IPA step to ensure the parts are fully cleaned.
- Rinse the parts with IPA for a minimum of 3 minutes until all the visible uncured resin has been removed. A syringe or pipette may be used to clean fine structures or holes. Note that reusing IPA in multiple cleaning cycles can reduce the cleanliness and clarity of a print.
- Parts can also be cleaned with centrifugal methods and IPA-containing ultrasonic cleaning units.
- If parts still appear dirty after drying, utilise another wash-dry cycle until parts appear clean.
- Leave the prints to dry off any residual solvent prior to post-curing for at least 60 minutes. Alternatively, you can dry them with compressed air or place them into a ventilated warming cabinet at 40^0C for 30 minutes to dry.

Post curing

Crestaform® Dental C & B Model Beige requires adequate post-curing to achieve the optimal mechanical properties.

- In order to achieve an even curing, parts should be flipped over during the post-curing cycle.
- Additionaly, if UV only is used for post curing, thermal step may be employed. This will increase the rigidity of the print and ensure optimal properties.
- Vacuum, nitrogen or temperature can be used in combination with UV during post cure.

Post-curing unit	Lamp Type	Power (W)	Post-curing duration	Notes
Formlabs FormCure	405 nm LED	39	30 minutes	UV only

Curing Units Compatibility

Crestaform® Dental C & B Model Beige is compatible with array of different post curing models, including, but not limited to:

- Dreve PU90
- RS Cure XL
- Otoflash
- Formlabs
- Photocentric

These steps serve merely as broad recommendations. The post-curing process should be tailored to each situation by the user, as the most suitable performance of the material depends on the user's specific requirements and the available equipment.

For more information about mechanical properties, please refer to the product specific TDS.

Packaging

Crestaform® Dental C & B Model Beige can be supplied in 1kg, 5kg and 10kg containers. For bulk supply contact us directly.

General advice

- Always read material SDS before use.
- Always wear Personal Protection Equipment (PPE), protective eyewear and chemical nitrile gloves when handling resin.
- **Always shake the resin well before use.**
- If spilled, clean area immediately with paper towel, and Isopropanol (IPA).
- Store in original container at room temperature. Keep away from direct light, heat sources, sparks and open flames.
- Keep material and printed parts away from children and pets.
- Use it in well ventilated rooms.
- Use every sensible preventive precaution to avoid skin contact, spillage of resin, eye contact or swallowing. Make note of Local Poison Centres availability.
- Dispose resin or used IPA according to local regulations.

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