

Instructions for Use

DENTAL LT CLEAR

Prepared: 08/02/2017

REV: 02

The following instructions for use are for Formlabs Dental LT Clear biocompatible photopolymer resin (Dental LT Clear). Basic information about safety and environmental concerns are also included. For more detailed safety and environment information please refer to the safety datasheet, available at formlabs.com. For further information regarding the use of this material, please contact Formlabs.

- DE** Um eine deutschsprachige Gebrauchsanweisung zu erhalten, besuchen Sie bitte entweder Formlabs.com oder kontaktieren Sie den Formlabs Kundenservice.
- FR** Le mode d'emploi est disponible en Français sur Formlabs.com et via notre service client.
- JA** 日本語での使用方法についてはFormlabs.comを参照、または弊社のカスタマーサポートまでお問い合わせください。

1. Introduction & Contra-indication

Dental LT Clear is a biocompatible photopolymer resin. It is a monomer based on acrylic esters. Dental LT Clear is Class IIa CE-certified.

Dental LT Clear can only be used exclusively with Formlabs stereolithographic 3D printers. It is designed for the manufacture of 3D printed parts for use as dental splints and retainers for permanent use (>30 days). Dental LT Clear should not be used for any other purpose.

Dental LT Clear is a speciality product, developed for use by dental professionals, and should be used in accordance with the instructions for use. Users should independently verify the suitability of the material for their particular application and intended purpose. Any deviation from the instruction for use may have an adverse affect on the chemical and physical quality of Dental LT Clear. In case of an allergic reaction, please contact a medical physician.

Use dedicated accessories for Formlabs biocompatible resins. For full compliance and biocompatibility, Dental LT Clear requires a dedicated resin tank and build platform. Finishing kits should only be used with biocompatible resins.

2. Hazard and Precaution

Eye Contact: High vapor concentration may cause irritation.

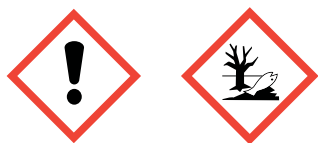
Skin Contact: May cause sensitization by skin contact. Irritating to skin. Repeated and/or prolonged contact may cause dermatitis.

Inhalation: Irritating to respiratory system. High atmospheric concentrations may lead to irritation of the respiratory tract, dizziness, headache and anesthetic effects.

Ingestion: Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

Protection: Protective glasses and nitrile gloves should be worn while handling Formlabs Dental LT Clear resin. Detailed information about the handling of Dental LT Clear resin can be found in the safety datasheet at www.formlabs.com.

Hazard Phrases: Signal Word: Warning



Hazard Statements

- H315** Causes skin irritation
- H317** May cause an allergic skin reaction
- H319** Causes serious eye irritation
- H411** Toxic to aquatic life with long-lasting effects

3. Storage Precautions & Expiry Date

Storage Precautions: Suitable — Store in a cool, dry place out of direct sun light, in opaque or amber containers. Store the containers at 10 – 25 °C (50 – 77 °F). Do not exceed 25 °C (77 °F) when in storage. Keep containers closed. Avoid ignition sources. Do not expose to UV-light and moisture.

Expiry Date: Product expiry date can be found on container label. Product is only guaranteed for use prior to this date.

POST-CURE REQUIRED. SEE REVERSE FOR INSTRUCTIONS.

4. Printing Parts

For full instructions on the use of Formlabs 3D printers, please refer to formlabs.com or contact Formlabs customer support.

Shake Cartridge: Shake cartridge for 5 minutes before use. Color deviations and print failures may result when shaken insufficiently.

Set up: Insert resin cartridge into a compatible Formlabs 3D printer.

Printing: Prepare a print job using PreForm software. Send print job to printer. Begin print by selecting print job from print menu. Follow any prompts or dialogs shown on printer screen. Printer will automatically complete print. lighting setup is six (6) 18W/71 lamps (Dulux L Blue) and six (6) 18W/78 lamps (Dulux blue UV-A).

Part Removal: Remove build platform from printer. Remove part from build platform using the part removal tool. For detailed techniques see our online support material.

5. Processing Printed Parts

Rinsing: Required – rinse parts in an alcohol solution (96%) for two minutes to dissolve any uncured or excess resin. Transfer to a new bath of clean alcohol solution (96%) for an additional three minutes. Use an ultrasonic bath in both steps to ensure parts are fully cleaned. Do not rinse for extended periods in alcohol solution as this may cause defects in the printed parts.

Drying & Inspection: Required – Parts should be allowed to dry thoroughly. Ensure that parts are clean and dry, with no residual alcohol, no residual/excess liquid resin or stickiness.

Post-Curing: Required – parts must be fully post-cured for biocompatibility and optimal mechanical properties. Parts can be post-cured by exposure to UV light. Cure time will depend on the wavelength and intensity of light used. One acceptable method for post-curing is exposure for 10 minutes to 108 watts each of Blue UV-A (315-400nm) and UV-Blue (400-550 nm) light, in a heated environment at 60 °C (140 °F). One acceptable lighting setup is six (6) 18W/71 lamps (Dulux L Blue) and six (6) 18W/78 lamps (Dulux blue UV-A).

The final performance characteristics of cured photopolymer resin may vary according to your compliance with the instructions for use, application, operating conditions, material combined with, end use, or other factors. For further information on post-curing, as well as recommended post-curing solutions, please contact Formlabs customer support.

Support material removal: Support material should be removed from printed model using cutting tools such as those provided in the Formlabs printer finishing kit, or conventional dental methods and instruments. Clean up support artifacts using sand paper, files, or other abrasive tools. For complete instructions on cleaning and polishing parts, visit www.formlabs.com/support.

6. Cleaning and disinfecting

Disinfecting: Recommended – Clean with non-chemical products. If chemical disinfection methods are necessary, ethanol solution is recommended.

7. Disposal Considerations

Dental LT Clear in its polymerized form is not environmentally harmful. Residual waste material in liquid state should be delivered to a collection point for chemical waste material.


Disposal: Dispose of in accordance with governmental regulations (community, national or regional). Contact a licensed professional waste disposal service to dispose of this mixture. As with all foreign substances, do not allow to enter storm or sewer drainage systems. Avoid release of residual waste material in liquid state into the environment.

Contaminated Packaging: Dispose of as unused product. Expose the open emptied container to light, then dispose.


8. Symbols & Manufacturer Information

 : CE mark

 : Batch number of product

 : Keep away from sunlight

 : Manufacturer

 : Consult instructions for use

 : Use-by date

Dental LT Clear is manufactured for Formlabs by Vertex Dental.

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Additional Resources

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This guide is available in other languages on our website.