



RODIN

3D Resin

Rodin Bite Splint

Instructions For Use Guide

1. Material Description

Rodin Bite Splint is a Biocompatible, Class I resin for use fabricating full maxillary arch custom bite splints, and corrective oral appliances in combination with CAD/CAM systems.

2. Composition

Rodin Bite Splint resin is comprised of a Dimethacrylate based resin, photo initiator, inhibitor, and pigments.

3. Intended Customer

Rodin Bite Splint resin is intended to be used only by trained professional dentists or dental lab technicians. All sales are restricted to dental supply dealers, teaching institutions and government dental facilities. This product is labeled for sales restricted to dentists (or licensed practitioner) unless state and local laws permit otherwise.

4. Intended Use

Rodin Bite Splint resin use is specific for fabrication of full maxillary arch custom bite splints, mouth guards specific for grinding, and snoring appliances. Rodin bite tray resin requires a computer-aided design and manufacturing (CAD/CAM) system includes the following components not part of the device: oral casting impression, digital restorative file created from a scanned impression system, stereolithographic additive printer, and curing light equipment. For use in tandem with **validated** 3D printers and post-curing devices listed below while following manufacturer's suggested instructions.



5. Contraindications

5.1 Designing bite trays with a thickness below 0.75mm is not recommended for custom bite splint designs. Breakage and/or deformation of the bite splint may occur during removal from the patient's mouth.

6. Orientation & Supporting

6.1 Orientate bite splint or corrective appliance designs with adaptive area facing down at a 45-degree angle. Place the supports on the parameter of the ridge. Avoid placing supports within adaptive sensitive areas which may cause discomfort if overlapping in the gingival area or collide with teeth which may prevent bite splint from fully seating.

6.2 The recommended minimum support diameter is 0.3mm at the point of contact where the support meets the restoration.

6.3 The recommended minimum support height is 2mm for ease of splint removal from the build plate.

7. Mixing

3D printing resins contain chemicals of different weights; therefore, it is essential to thoroughly mix the resin prior to starting a new print job.

7.1 For resin already in the resin vat, use a silicon blade or spatula to gently mix resin if it has been sitting for longer than a 12-hour period.

7.2 Before dispensing the resin from the bottle, use a plastic spatula to stir the bottom of the bottle for 1 minute minutes before dispensing or mix using an automated bottle roller for 10 minutes.

7.1 If the bottle has been in storage for excess of a month, it is recommended to roll the bottle for 1 hour to allow the chemical components to mix thoroughly.

8. Post-processing Instructions



8.1 After completion of the print job, remove the build platform from the 3D printer.

8.2 Wash printed trays in 99% IPA in a vortex or ultrasonic bath for 5 minutes then move semi clean parts to a secondary vortex or ultrasonic bath with fresh 99% IPA for an additional 5 minutes.

Note - Do not expose bite splints to IPA for longer than 10 minutes in total to prevent material strength loss.

8.5 Use compressed air to remove excess IPA and/or residual uncured resin.

8.6 Repeat steps 4 and 5 until the restoration is thoroughly clean leaving a shine-free, matte finish.

8.7 Post-cure trays in a **validated** light curing device following recommended time and temperature schedules if applicable.

Note – Post curing must be performed to be in compliance with FDA.

9. Validated 3D Printers

9.1 Asiga Max (385nm), Asiga Pro4k (385nm), Asiga Pico 2 (385nm)

9.2 Ackuretta Sol

9.3 Phrozen Sonic Mini 4K, Phrozen Sonic 4K

10. Validated Light Curing Devices

10.1 Otofash – Post cure at 4500 flash cycles (recommended for optimum mechanical properties).

10.2 Dreve PCU LED N2 – 15 minutes @ 80% Light intensity

10.3 Ackuretta Curie – 10min, P16, D10, BL On

10.4 Form labs Form Cure – 15 minutes @ 60C

Note - No inert or vacuum environment required when post curing these materials.

11. Chairside Adjustments and Impression Taking

11.1 If making chair side adjustments to the bite splint, remove undesired material with standard dental carbide burs. Smooth sharp edges and remove burs with dental polishing wheels.



11.2 Follow recommended manufacturer's impression kit instructions when dispensing impression material and allow impression material to fully set before tray removal from patient's mouth.

12. Environment Conditions

12.1 3D photopolymer resins are very light-sensitive, sensitive to ambient office lights and sun light from a window. Do not leave resin bottles open. Resin that has been poured into a resin tank should be covered if not used.

12.2 Best to store resin between 65F and 85F. Printing temp should be set to 30 degrees Celsius for optimum performance if applicable. If the bottle is stored in colder lab conditions as indicated above, it is recommended to place resin bottle with lid tightly sealed in a warm water bath.

13. Nightly/Long-term Storage

At the end of the day, it is best to pour unused resin from the printer back into the resin bottle for storage. When pouring resin from your tank or other vessel back into the bottle, always pour through a fine mesh filter. This will trap partially-cured debris and prevent contamination of the rest of your bottle, prolonging the life of your materials. The resin is best stored in its original container to maintain shelf-life.

14. Disposal

Dispose in accordance with all federal, state and local regulations. Consult state and local hazardous waste regulations to ensure complete and accurate classification of waste. US EPA guidelines for the classification of hazardous waste are found in 40 CFR part 261.3. Liquid resin should be cured before being disposed of. Pour liquid resin into a clear container and set it in direct sunlight. Once it has cured, it can be treated as waste and disposed of in the regular trash.

15. Legal

**Pac-Dent Inc. releases all legal liability if the end user deviates from instructional guidance and/or using invalidated equipment that may alter the function and/or performance of the restoration.