SprintRay NightGuard Flex Resin Instructions For Use

Indication

The SprintRay NightGuard Flex resin is a light-curable polymerizable resin intended to be used with extraoral curing light equipment. The NightGuard Flex resin is indicated for the fabrication, by additive manufacturing, of:

- Nightguards
- Occlusal guards
- Occlusal splints

Fabrication of dental applications with SprintRay NightGuard Flex Resin requires a 3D design of the custom device designed by a qualified provider. It also requires a 3D Printer and Cure System to produce the devices.

Contraindication

The NightGuard Flex resin is contraindicated in case of the following:

- If a patient is known to be allergic to any of the ingredients.
- Direct intraoral contact of uncured or partially uncured material.
- For every application that is not part of the indication (see above).

Handling and Processing

NightGuard Flex Resin is non-toxic in both liquid and solid form, and it is classified as Biocompatible material, cleared by FDA. It is also classified as a sensitizer, which means that exposure over time can cause your body to have a mild allergic reaction. May cause skin irritation. May cause an allergic skin reaction. May cause severe eye irritation. May cause respiratory irritation. Here is how to handle resin safely:

1. Always wear gloves

Always wear gloves when handling uncured resin. Whether you are pouring, removing printed parts from the platform, or even after they have been washed, must wear gloves to limit exposure to resin.

2. Mix thoroughly

3D printing resins contain chemicals of different weights; therefore, it is essential to mix resin before every print thoroughly. For resin already in the tank, use provided resin wiper to stir the material gently. If pouring from a bottle, shake the bottle vigorously for several minutes before dispensing.

3. Filter resin

When pouring resin from your tank or other vessels 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.

4. Check expiration dates

Resin has a shelf life; it is essential to keep an eye on the expiration date. The use of expired resin will likely result in failed prints, as the compounds required for curing break down and will not activate properly. The expiration date for resins is printed on the back of the bottle.

5. Dispose of properly

Liquid resin should be cured before being disposed. Pour liquid resin into a clear container and set it in direct sunlight. Once cured, it can be treated as waste and disposed of in the regular trash.

Fabrication of NightGuard

1. Preparation Before Printing

Being prepared is key for success! As you plan to implement this new workflow, check all the supplies and inventory you may need or desire for a seamless workflow.

- Pro Printer
- Pro Wash/Dry™
- ProCure™

- RayWare software
- SprintRay NightGuard Flex Resin
- Gloves
- (IPA) Isopropyl Alcohol **91%** or higher
- Scott Shop towels
- Protective eyewear
- Flush cutter
- Scotch-Brite™/Fuzzies™ Wheel
- Polishing compound and muslin wheel

2. Design of the NightGuard

Once the intraoral scans of the patient are submitted to a dental-design service/lab, the NightGuard is designed and provided in STL file format by the dental-design service/lab.

3. Printing

Bring the designed STL files to RayWare. Position the NightGuard on print platform so that the intaglio surface is facing up, and the occlusal plane makes an angulation of 20-30 degrees to the print platform. The anterior part of the design should be closer to print platform than the posterior.

Add full supports.

Select "SprintRay NightGuard Flex" resin setting for print-setting and use 100-micron thickness.
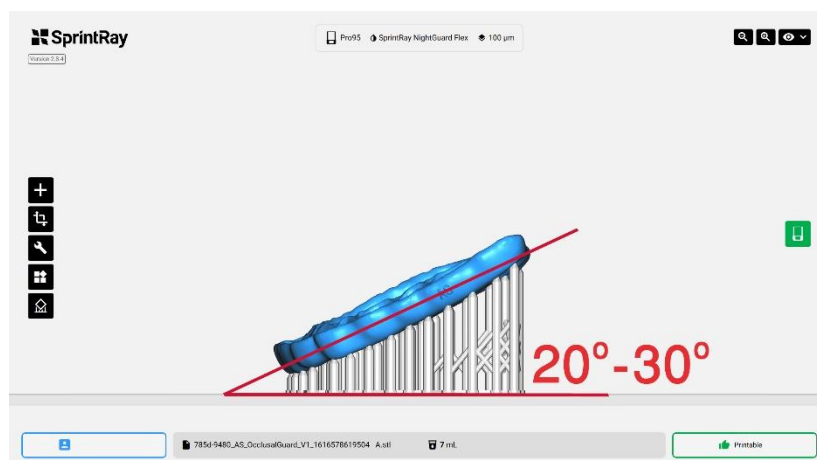
Ensure Resin Tank is fully secured and filled to the recommended Resin-Level.

Ensure the Print Platform is clean, dry, securely placed, and locked on the platform-arm.

4. Washing and Drying

After your NightGuard has been printed successfully, it must be washed using Isopropyl Alcohol (IPA) with a concentration of 91% or higher before being post-cured.

SprintRay highly recommends Pro Wash/Dry for your cleaning process; however, if you don't have access to a Pro Wash/Dry yet, you may allocate a separate Ultrasonic bath dedicated to post-print washing with IPA or a dish for soaking along with a Soft/Medium bristle brush to manually clean your prints in IPA. Ensure NOT to immerse the NightGuard for more than 10 min in the IPA bath. Remember: IPA is highly flammable! Please keep it away from heat sources, sparks, and flames.

Ensure that your NightGuard is completely dry before the next step; if not, use compressed air to dry your NightGuard rapidly.

Remove the NightGuard from the Print Platform.

5. Post curing

Next, the printed NightGuard needs to be properly post-cured using a ProCure to maximize strength and accuracy and comply with FDA standards.

All the post-curing settings are preset in ProCure 1 and ProCure 2 unites.

6. Support Removal

Once the post-curing is completed, we need to remove all the supports by using a flush cutter. Try to cut as close as possible to the NightGuard to minimize the smoothening and finishing procedure.

Finishing and Polishing

1. Finishing

Use the Scotch-Brite™/Fuzzies™ Wheel for smoothening the denture surface.

2. Polishing

Use pumice and muslin wheel to remove the minor scratches from the surface.
Use polishing compound and muslin wheel to further polish the surface.

Additional Help & Support

We are here to support you throughout the implementation period of your new technology and throughout the life of your product. Our experienced support technicians are available M-F from 7 am – 5 pm PST at 800-914-8004 (EXT 2).