

SprintRay Nano Ceramic Hybrid OnX

Instructions for Use

Indications for Use

SprintRay Nano Ceramic Hybrid OnX is a tooth shade resin-ceramic hybrid material used for the fabrication of prosthetic devices by dental professionals.

Contraindications

SprintRay Nano Ceramic Hybrid OnX is contraindicated when:

- a patient is known to be allergic to any of the ingredients
 - there is direct intraoral contact with resin that is not fully cured
 - it is used for any purpose other than its indications for use
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Device Description

Nano Ceramic Hybrid OnX is an alternative to traditional dental prosthesis material that is intended exclusively for professional dental work. It is available in various shades, such as: Bleach, A1, and B1.

Printing and Hardware Parameters

These device specifications have been validated using the following manufacturing products. Any products or processes not specified in this document are outside of the device specifications.

- a. **CAD File:** CAD file of treatment device in STL file format with the following thickness:
 - i. ≥ 0.5 mm
- b. **Printer:** SprintRay Pro or Pro S DLP 3D printer
 - i. 55 or 95 micron XY resolution
 - ii. Light energy of 28.8 mW/cm^2
- c. **Software:** RayWare Desktop or RayWare Cloud
 - i. STL file import
 - ii. Manual/automatic orientation
- d. **Printing Parameters**
 - i. Intaglio surface facing away from build platform
 - ii. 50 micron layer thickness
 - iii. Default support structures
- e. **Wash:** Hand spray & wipe the device

- i. Wipe off, spray with IPA 91%
 - ii. Blast with compressed air
 - iii. Repeat 6-7 times
 - iv. Don't let IPA stand for more than 30 secs on the device
- f. **Cure Device:** SprintRay ProCure 2 or ProCure
- i. Use manufacturer recommended curing times

Warning and Precautions

SprintRay Nano Ceramic Hybrid OnX is non-toxic in processed, cured form, and is classified as a biocompatible material. In uncured form, Nano Ceramic Hybrid OnX is classified as a sensitizer. When washing with solvent or grinding the device, do so in a well-ventilated area with proper protective equipment.

- **Skin Contact:** May cause skin irritation. If unprocessed resin contacts skin, wash thoroughly with soap and water. May cause an allergic skin reaction. If skin sensitization occurs, stop using. If dermatitis or other symptoms persist, seek medical assistance.
- **Inhalation:** High vapor concentration may cause headache, irritation of eyes and/or respiratory system. If exposed to a high concentration of vapor or mist, move to fresh air. Use oxygen or artificial respiration as required.
- **Eye Contact:** Wash the contacted area thoroughly with soap and water.
- **Ingestion:** Contact your regional poison control center immediately.

Storage

- **Material Reuse:** The remaining resin in the resin tank can be reused. You may use a filter to ensure the resin is free from any cured particles to avoid print failures. The remaining material in the tank can be poured back into the resin bottle upon filtration. This process can be repeated until the material in the bottle is fully consumed. Please note that in the case of reuse, the resin must be filtered and poured back into the same bottle.
- Store Nano Ceramic Hybrid OnX at 15-25°C (60-77°F) and avoid direct sunlight.
- Keep the bottle closed and/or the tank lid securely attached when not in use.
- Before disposal, completely polymerize.
- Do not use Nano Ceramic Hybrid OnX after the expiration date printed on the bottle.



Do not use expired resin; biocompatibility and print stability may be compromised if expired photoinitiators do not activate properly.

Fabrication of Device

Designing

The device is designed in STL file format by a dental design service or dental CAD software using digital anatomical data from the patient. This STL file is delivered to the clinician for fabrication.

3D Printing

Sign in to RayWare Cloud and select the appliance type; the algorithm will automatically orient and add supports. Select this material and use 100-micron layer thickness. Queue the job to your printer.

Shake the resin bottle thoroughly for one minute, then pour into the resin tank up to at least the min fill line. From the printer touchscreen, navigate to the printer queue. Start the print job.

Part and Support Removal

After your device has been printed, remove it from the print platform using the provided Print Removal Tool. Remove all supports using a flush cutter or round diamond disc. Cut as close as possible to the device to minimize the smoothing and finishing procedure.

Washing and Drying

Use $\geq 91\%$ IPA to wash the device using the following method:

- Wipe off, spray with IPA 91%
- Blast with compressed air
- Repeat 6-7 times
- Don't let IPA stand for more than 30 secs on the device

Dry the part completely before post curing.

Post Curing

Use one of the following post-curing equipment and processes. For both SprintRay devices, use the recommended settings

- ProCure 2 (preprogrammed material profile)
- ProCure (60 min at 60° C)

Dry the part completely before post curing.

Finishing

Remove excess support nubs by using a lab handpiece and carbide bur.

Polishing

For best results, use the SprintRay Restorative Finishing Kit. Follow the instructions on the kit to obtain a polished, glossy finish.

Characterization

You may use an OptiGlaze™ kit by GC for a cosmetic effect. Apply and light cure the OptiGlaze colors and stains on the device. When finished, finalize with clear glaze. Wash and clean the device with a brush using soap and warm water.

Additional Help & Support

We are here to support you throughout the implementation period of your new technology. Our experienced support technicians are available M - F from 6 AM - 5 PM PT at 800-914-8004.

Contact Information

For product assistance, please review help information at:

<https://sprintray.com/digital-dentistry/>

To report product issues, please contact SprintRay at:

<https://support.sprintray.com/hc/en-us/requests/new>

Phone: 1-800-914-8004



Manufacturer information

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