High Impact Denture Teeth

Instructions for Use

Indications for Use

SprintRay High Impact Denture Teeth is a light-curable polymerizable resin intended to be used to fabricate artificial teeth for full and partial removable dentures. This material is an alternative to traditional denture teeth material.

Contraindications

SprintRay High Impact Denture Teeth 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

SprintRay High Impact Denture Teeth is an alternative to traditional materials used to fabricate denture teeth. The product is offered in various shades: Bleach, A1, A2, and B1.
It is intended exclusively for professional dental work.

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
    i. Minimum thickness 0.5mm
b. **Printer**: SprintRay Pro or Pro S DLP 3D printer
    i. 55 or 95 micron XY resolution
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. 100 micron layer thickness
    iii. Default support structures
e. **Wash Device**: SprintRay Pro Wash/Dry, SprintRay Pro S Wash/Dry (recommended) or hand spray & wipe

   i. 91% or higher IPA
   ii. Standard preprogrammed wash cycle

f. Cure Device: SprintRay ProCure 2 or ProCure
   i. Use manufacturer recommended curing times

Warning and Precautions

SprintRay High Impact Denture Teeth is non-toxic in processed, cured form, and is classified as a biocompatible material. In uncured form, High Impact Denture Teeth 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 High Impact Denture Teeth 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 High Impact Denture Teeth 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 smoothening and finishing procedure.

Washing and Drying

Use ≥91% IPA to wash the device using one of the following methods:

- Hand spray and wipe with a dry towel
- SprintRay Pro Wash/Dry

Dry the part completely before post curing.

Denture Assembly

Use denture base resin to adhere the teeth to the base. To obtain the optimal bonding of artificial teeth to the dental object, it may be necessary to roughen the surface of the denture/teeth sockets before assembly.

- Place a drop of the denture base resin into each tooth socket
- Place the teeth in the sockets
- Press the teeth and base firmly together
- Use a curing light to tack cure the pieces together

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.

Polishing

Use a Scotch-Brite™/Fuzzies™ wheel to smoothen the denture, then pumice and polishing compound and muslin wheel to polish the surface. You may use a pink compound bar and cotton buff to achieve a mirror finish.

Clean & Disinfect

Use a laboratory steamer to clean the denture of all debris and polishing compounds. Use dish soap and a brush with warm water.

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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