SprintRay Castable 2
Instructions For Use

Indications for Use

The SprintRay Castable 2 is a light-curable polymerizable resin intended to be used for fabricating castable parts.
This material is an alternative to traditional dental wax and castable material.

Contraindications

SprintRay Castable 2 is contraindicated when:
- There is a known allergy to any of the ingredients
- there is direct intraoral contact with resin whether cured or not cured
- it is used for any purpose other than its indications for use

Device Description

Castable 2 is an alternative to traditional material for the fabrication of castable parts. It is intended exclusively for professional dental work.

Printing and Hardware Parameters

This 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
b. **Printer**: MoonRay, or 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 ProWash S or SprintRay Pro Wash/Dry
    i. 91% or higher IPA
    ii. Standard preprogrammed wash cycle
f. **Cure Device**: SprintRay NanoCure, ProCure 2 or ProCure
    i. Use manufacturer recommended curing times

Warning and Precautions

SprintRay Castable 2 is not a biocompatible material in cured form. In uncured form, Castable 2 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 Castable 2 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 Castable 2 after the expiration date printed on the bottle.

⚠ Do not use expired resin as biocompatibility, performance, and print stability may be compromised.

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 a dental lab for fabrication.

3D Printing

Sign in to RayWare Cloud and select the appliance type "Other Print"; the algorithm will automatically orient and add supports. Make any necessary changes. 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 the SprintRay ProWash S or SprintRay Pro Wash/Dry:
- Standard cleaning cycle

Dry the part completely before post curing.

Post Curing

Use one of the following post-curing equipment from SprintRay to cure the device and select the preprogrammed profile for Castable 2:
- NanoCure (preprogrammed material profile)
- ProCure 2 (preprogrammed material profile)
- ProCure (15 min at 30º C)

Finishing

Wash and clean the device with a brush using soap and warm water.

Investment and Burnout Instructions

Castable 2 is designed for casting gypsum and phosphate-bonded investments, the latter of which we find to be best for dental applications. Whichever you choose, it's important to follow the manufacturer's instructions when preparing the investment mixing ratios and allow proper full bench-set time.

Note: Because there is no liquid wax to flow out, we recommend keeping the flask horizontal in the center of the furnace rather than vertical.

Gypsum Investment Instructions

For gypsum investment, preheat the furnace to 700C, then place the investment into the furnace. Ramp up the temperature to 850C and hold this temperature for one hour per 100G investment. Once the hold is finished, allow the furnace to cool back down to 700C before removing the investment.

Phosphate-Bonded Investment

For phosphate-bonded investment, preheat the furnace to 800C, then place the investment into the furnace. Ramp up the temperature to 950C and hold for one hour for the first 100G of investment and +30 minutes for each additional 100G of investment. Once the hold is finished, allow the furnace to cool back down to 800C before removing investment.

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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