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TECHNICAL DATA SHEET
3D RESIN PORTUX SG
DPFTPT-157

1. GENERALITIES OF THE PRODUCT

PORTUX 3D SG resin is a low-viscosity photopolymerizable resin intended for the printing of surgical guides. It has a slightly bluish and translucent color, allowing specialists to clearly visualize adjacent tissues and teeth. Additionally, it helps in placing implants at precise angles and depths. This resin can be sterilized in an autoclave without suffering dimensional deformations, fractures, or yellowing that could affect the final integrity of the guide. It is compatible with *open-source* DLP printers with 385 and 405 nm wavelength, and monochromatic *open-source* LCD printers with light of 405 nm.

2. INFORMATION ABOUT COMPOSITION

- Mix of acrylic resins.
- Polymerization initiators (diphenyl(2,4,6-trimethylbenzoyl) phosphine oxide).
- Pigments.

3. PROPERTIES OF THE PRODUCT

- Flexural strength: >50 MPa (ISO 10477).
- Flexural modulus: >1800 MPa (ISO 10477).
- Water sorption: <40 µg/cm³ (ISO 10477).
- Water solubility: <7,5 µg/cm³ (ISO 10477).
- Non-cytotoxic (ISO 10993-5).
- Non-sensitizing (ISO 10993-10).
- Non-irritating (ISO 10993-23).

4. USE AND APPLICATIONS

PORTUX 3D SG resin is indicated for the printing of surgical guides that are biocompatible and sterilized in autoclave, suitable for intraoral use in guided dental implant surgery.

5. QUALITY ASSURANCE OF THE PRODUCT

New Stetic S.A has strict standardized internal controls in the manufacture of its products, in order to guarantee an optimum quality for the final customer. Additionally, it has qualified personnel in the Quality Control area, where the compliance with the final specifications of the product is verified, in

accordance with the established regulations, with the help of physical resources such as calibrated equipment.

6. INSTRUCTIONS FOR USE

- Shake the container for at least twenty minutes, preferably in a mechanical vibration device or roller, before opening the product for the first time. This ensures proper printer performance and color reproducibility.
- In order to prevent bubbles, shake the product at least one hour prior to use it.
- Print with the PORTUX 3D SG resin following the handling and usage instructions of your printer.
- Post-processing of printed guides:

    - Clean the guides in isopropanol or ethanol (>90%), preferably using an ultrasonic cleaner to facilitate the cleaning process. Immerge the prints in a container with used alcohol for 5 minutes, then immerge them in clean alcohol for the same amount of time. It is recommended to use compressed air between cleanings to remove the resin surplus from cavities or critical areas of the print.
    - Remove the guides from the alcohol and dry them either by gently applying compressed air or in an oven at 40 °C for 30 minutes. **IMPORTANT:** *Avoid curing wet or moist prints as this affects the final accuracy and definition of the prints.*
    - It is recommended to adapt the titanium rings to the guide before post-curing. Once adapted, cure the part in a NextDent LC-3DPrintBox chamber for 30 minutes as follows:
      • 15 minutes exposure.
      • 5 minutes rest.
      • 15 minutes exposure.
    - After post-curing, it is recommended to autoclave the guide for steam sterilization at a temperature of 121°C for 16 minutes.

7. COMMERCIAL PRESENTATIONS

The PORTUX 3D SG resin comes in presentations of 250 g, 500 g and 1 kg.

8. STORAGE AND PRESERVATION CONDITIONS

The product must be always kept in its original packaging at room temperature (< 30°C), preserving it from the following conditions:

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- Direct exposure to sunlight or other types of radiation.
- High heat or humidity sources.
- Dust or other types of contaminants.