

Use of XYZprinting Biomedical Acrylic Resin

XYZprinting Biomedical Acrylic Resin is a UV light curing material for 3D printing of surgical guides. The product has passed the biocompatibility testing for cytotoxicity, irritation, and sensitization assessment.

- Compatible printer: XYZprinting Nobel Superfine 3D printer. It can also be used on other 405nm UV resin 3D printers.

Ingredients

Acrylate oligomer, acrylic monomer, photo initiator.

Delivery unit

Container of 500g, 2 bottles per package.

Indication for use

The resin is for the 3D printing of surgical guides.

Contraindication

Printed products must not be used if an allergic reaction to any of the ingredients is known.

Interactions

No interactions have been observed.

Adverse reactions

Unpolymerized material may cause skin and serious eye irritation if warning notes are disregarded.

Warning notes

- Read MSDS before use and follow the standard process for cleaning.
- Wear personal protection while handling.
- Wash with soap water or clean water after contacting with resin.

Storage and transportation conditions

- Store in a cool, ventilated area, and away from sunlight, ultraviolet and other light or heat sources to avoid deterioration.
- Store between 10°C (50°F) to 32°C (89.6°F). Maintain transport temperature below 60°C (140°F).
- Do not use after shelf life.
- **When the product is left unused in the tank on the printer, store the remaining resin in a opaque container to avoid contamination of the resin.**

Recommended working conditions

- Temperature: 20°C (68°F) to 26°C (78.8°F).
- Relative humidity: ≤ 50% RH

Sales & Distribution (EU)

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Disposal instructions

- Waste must be stored in safe containers until processing.
- Residues and spilled material may be hazardous waste due to potential for internal heat generator. Disposal must be in accordance with applicable federal, state, or local regulations. Industrial waste must be incinerated as appropriate.

Equipments required for manufacturing

- XYZprinting Nobel Superfine or other 405nm UV resin 3D printer.
- XYZprinting UV Curing Chamber or other post-curing device.
- Ultrasonic cleaner.
- 75% alcohol, RO water.
- Cleaning detergent "Metriclean 2", or other liquid cleaner intended for manual cleaning/ disinfection and suitable for ultrasonic treatment.

Manufacturing process:

- 3D printing with XYZprinting Biomedical Acrylic Resin.
 - Follow the instructions of the 3D printer.
- Pre-clean:
 - ① Rinse the printed objects with 75% alcohol for 5 - 10 minutes.
 - ② Allow the objects to fully dry.
- Post cure with UV lamp:
 - Any curing devices may be used if suitable. Post cure the objects for 10 minutes is required under power intensity of 10-15mJ/cm².
 - Curing profile for XYZprinting UV Curing Chamber: POWER - 03, TIME - 10 minutes.
- Ultrasonic bath for maximum cleaning:
 - ① Prepare an ultrasonic bath with a fresh detergent solution using a detergent solution at the concentration and temperature specified in the detergent manufacturer's instructions.
 - Any ultrasonic detergent for cleaning medical and dental instruments may be used if suitable.
 - If "Metriclean 2" is used, heat clean water to 50°C (122°F) and dilute the detergent in the ratio of 1:130 to water.
 - ② Clean the printed objects ultrasonically in diluted liquid cleaner for 60 minutes.
 - ③ Wash the objects thoroughly in tap water for a minimum of 2 minutes.
 - ④ Ultrasonically clean in clean water for 15 minutes.
 - ⑤ Ultrasonically clean in RO water for 60 minutes.

