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VarseoSmile TEMP

INSTRUCTIONS FOR USE

Partners in Progress



VarseoSmile Temp

Resin for 3D printing of temporary crown and bridge restorations, inlays, onlays and veneers.

1. Intended use/Indication

VarseoSmile Temp is a light-curing, free-flowing plastic based on methacrylic acid esters for the production of temporary crowns and bridges, inlays, onlays and veneers using 405-nm DLP printers.

2. Contraindications

Known allergy to one or more ingredients. In cases of doubt, the allergy should be clarified and ruled out based on a specific test prior to the application of this product.

VarseoSmile Temp should not be used for purposes other than temporary crown and bridge work. Any deviation from these instructions for use can have negative effects on the chemical and physical quality of plastics made from VarseoSmile Temp 3D resin.

3. Safety instructions

VarseoSmile Temp is produced and tested according to the most stringent quality standards. In order to ensure optimum further processing, please read the information contained in the instructions for use carefully. The improper use of VarseoSmile Temp and failure to follow information can have a detrimental effect on the quality of plastic produced from VarseoSmile Temp 3D resin. Nitrile gloves, safety goggles and a coat must be worn as a means of protection when handling the resin and the plastic that has not been post-cured. Conventional medical gloves do not offer any lasting protection against the sensitising effect of methacrylates. If the product comes into contact with the glove, take the glove off and discard it, wash your hands immediately with water and soap and put on a new glove. Consult a physician in the event of an allergic reaction.

The safety and care instructions set down in the VarseoSmile Temp instructions for use and safety data sheet shall apply to the handling of liquid resin and printed objects that have not been post-cured (objects in the “green condition”). A dust mask must be worn too due to potential dust formation while the printed objects are being processed.

It is prohibited to use plastic parts made of VarseoSmile Temp as auxiliary equipment for food and drinks applications.

4. Side effects and precautions

Precautions/Protection

It is essential that protective clothing be worn when handling VarseoSmile Temp. Safety goggles and nitrile gloves must be used. Further information on handling the product can be found in the safety data sheet and also downloaded from the BEGO Download Centre at www.bego.com. However, we cannot completely rule out the possibility of personal reactions to individual components in isolated cases. In such cases, the respective user should discontinue use of VarseoSmile Temp. If intolerances or allergic reactions occur when it comes into contact with the patient, discontinue use of the material.



WARNING

Contains:

Ethoxylated bisphenol A-dimethacrylate, silanized dental glass, fumed silica, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, inhibitors

Information on hazards as per MSDS

- May cause an allergic skin reaction.
- May cause long lasting harmful effects to aquatic life.

Safety instructions as per MSDS

- Avoid breathing fume/vapours/spray.
- Avoid release to the environment.
- Wear protective gloves/eye protection.
- If skin irritation or rash occurs: Get medical advice/attention.
- Take off contaminated clothing and wash before reuse.
- Dispose of contents/container as per local and national regulations.

5. General information on handling

Delivery

VarseoSmile Temp is supplied in the colours A2 Dentin, A3 Dentin, C2 Dentin in lightproof and sealed bottles.

Filling quantity:

- REF 41022 = 0.5 kg, A2 Dentin
- REF 41023 = 0.5 kg, A3 Dentin
- REF 41024 = 0.5 kg, C2 Dentin

Please check the following points on receipt of the goods:

- Integrity of the bottle/pack
- Quantity
- Shipping documents and designation

Storage

VarseoSmile Temp must be stored in the original sealed bottle at room temperature (approx. 22 °C) in a dark, dry place. It must be ensured that the temperature does not drop below +4 °C and does not exceed +28 °C! The minimum shelf life date printed on the product must be observed. Perfect processing cannot be guaranteed if materials which have exceeded their minimum shelf life date are used.

6. Processing

VarseoSmile Temp is one of the system components in the BEGO Varseo 3D print system and has been optimised for use in the Varseo 3D printer.

The printing settings can be found in the instructions for use for the equipment.

Note:

- Max. construction length 7 units
- Pontic max. one molar width!
- Minimal connector surface: 12 mm²
- Minimal wall thickness: 1 mm
- Minimal wall thickness anterior teeth, cervical: 1.0 mm
- Inlays, onlays, veneers: min. 1.0 mm

Colour assignment for individualization

A2 =	A2	A3	B1	B2	D2	(A1)
A3 =	A3	A3,5	A4	B3	B4	
C2 =	C2	C3	C4	D3	D4	(C1)

The objects can be customised using stains such as els paintart* from Saremco Dental AG, Switzerland.

Please wear protective gloves (nitrile gloves), protective clothing, safety goggles and/or face protection during processing!

VarseoSmile Temp's ideal working temperature is in the temperature range between 18 °C and 28 °C.

When decanting, make sure that the printing resin is exposed to daylight for as short a period of time as possible.

For further processing – selecting the resin, setting up the print job – as part of the printing process, follow the Varseo printer instructions for use.

* This symbol is a commercial designation/registered trademark of a company which is not part of the BEGO company group.

Subsequent processing

On completion of printing, the print objects are released from the build platform using the spatula supplied. The print object should be cleaned in two steps with ethanol (96 %) using an ultrasonic bath.

Note: Never fill ethanol directly into the ultrasonic bath; place it in the recommended container (REF 19621) in the ultrasonic bath filled with water. Use an explosion-proof ultrasonic bath.

1. Clean the print object for **3 min** in a reusable ethanol solution (96 %) using an **unheated** ultrasonic bath.
2. The precleaned object must be cleaned thoroughly for **2 min** using a fresh ethanol (96 %) solution with the aid of an **unheated** ultrasonic bath. The print object is then removed from the ethanol bath and sprayed with additional ethanol (96 %) in order to fully rinse off any remaining resin residue.

Tip: Resin residues can also be removed using a brush soaked in ethanol (96 %).

The entire cleaning process should not take longer than 5 minutes as this could otherwise have a detrimental effect on the printed objects (swelling of the object with ethanol). After cleaning, the print object is dried using compressed air under an extraction unit. If there is liquid resin still adhering to the surface of the object, this can be completely removed by spraying again with ethanol (96 %) and re-drying.

Finishing

Sandblast the surface of the restoration carefully (Perlablast micro REF 46092/54302). The support structures are then removed. To this end, either a cutting wheel or side cutters can be used. It is advisable to wear nitrile gloves, safety goggles and a dust mask when finishing. The completely cleaned print objects must be post-cured to attain the required material properties and biocompatibility.

The objects can be customised using stains such as *els paintart** from Saremco Dental AG, Switzerland. The customisation should always be performed on the printed object and **prior to its final curing!**

Step-by-step recommended finishing and post-curing process:

1. Remove support structures. They can be removed using either a cutting wheel or side cutters.
2. Sandblast the surface of the objects carefully with Perlablast micro (REF 46092/54302) and at a maximum blasting pressure of 1.5 bar.

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3. Finish the objects completely. Finishing and contouring can be performed with carbide cutters or diamond grinding stones.
4. Optional step: High-gloss polishing of the objects and subsequent customisation with stains such as els paintart* from Saremco Dental AG, Switzerland.
5. Post-curing of the objects with BEGO Otofash or HiLite Power* (see table below), followed by cooling time.
6. For non-customised objects (skip Step 4): Polish the surface of the objects with pumice stone and polishing compound. Avoid overheating of the resin during polishing. Optimal surface quality is achieved by polishing after post-curing.

The final properties of the print object depend on the post-curing process. The final material properties are achieved using light polymerization units with the following performance data: **two xenon stroboscopic lamps, flash frequency 10 Hz, light spectrum 300–700 nm (e.g., BEGO Otofash) or one xenon stroboscopic lamp, flash frequency 20 Hz, light spectrum 390–540 nm (e.g., HiLite Power*, Heraeus Kulzer).**

VarseoSmile Temp			
Post-curing device	BEGO Otofash (with protective gas)	HiLite Power*	Comments
Flash	2 x 1,500	–	Turn object between the exposure cycles
Time [seconds]	–	2 x 90	

Note: When employing the BEGO Otofash, use the protective gas function. This results in a further reduction of the already low remaining monomer content. To do so, set the protective gas function to switch position 1. Details can be found in the instruction manual for the post-curing device.

Note: The times given only apply to regularly maintained equipment that guarantees a corresponding light intensity.

7. Storage and transportation of printed objects

The completely cured print objects must be stored at room temperature and protected from sources of bright light.

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8. Cleaning in the dental laboratory and dental practice

Fully cured crowns and bridges made from VarseoSmile Temp can be easily cleaned and disinfected. Steam cleaning (e.g., with Triton SLA) is possible. Disinfection in the immersion bath is also possible. It must be ensured that the disinfectant is suitable for the material.

9. Note for practitioners and patients

The temporary restoration can undergo high-gloss polishing with composite polishers commonly used in dental practice. The finished restoration can be attached using conventional temporary cements. If the subsequent definitive restoration is to be attached using methacrylate-based composite cement, the use of eugenol-free temporary cements is recommended. Observe the instructions for use of the luting agent.

10. Disposal

The cured, separated material (base plate, support structure) can no longer be used. Cured material can be disposed of as domestic waste. Unused resin or ethanol used for cleaning with resin residues must be disposed of via the local waste disposal authority or a hazardous waste collection point stating the safety data sheet.

11. Material properties and scope of delivery

Physical data			
Colour	A2 Dentin, A3 Dentin, C2 Dentin	Flexural modulus	≥ 2,000 MPa
Density	approx. 1.4–1.5 g/cm ³	Layer thickness	50 μm
Viscosity	2,500–6,000 mPa*s	Wavelength	405 nm
Flexural strength	≥ 80 MPa		

Delivery form				
	Contents	Presentation	Qty	REF
VarseoSmile Temp, A2 Dentin	0.5 kg	bottle	1	41022
VarseoSmile Temp, A3 Dentin	0.5 kg	bottle	1	41023
VarseoSmile Temp, C2 Dentin	0.5 kg	bottle	1	41024

12. Equipment

VarseoSmile Temp has been designed for use in the Varseo printers from BEGO Bremer Goldschlägerei Wilhelm-Herbst GmbH & Co KG.

13. Label symbols



Manufacturer



Batch code



Catalogue number



Protect from sunlight



CE mark



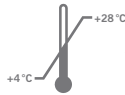
Consult instructions for use



Minimum shelf life



Warning



Storage and transport temperature



For specialist personnel only