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VarseoWax SURGICAL GUIDE

GEBRAUCHSANWEISUNG
INSTRUCTIONS FOR USE
INSTRUCTIONS D'UTILISATION
INSTRUCCIONES DE USO
ISTRUZIONI PER L'USO
ИНСТРУКЦИЯ ПО ПРИМЕНЕНИЮ
使用说明

Partners in Progress

BEGO

VarseoWax Surgical Guide

The resin for the 3D printing of surgical guides.

1. Intended use / Indication

VarseoWax Surgical Guide is a monomer based on acrylic esters for manufacturing of 3D-printed surgical guides. Suitable for printing all types of surgical guides.

2. Contraindications

VarseoWax Surgical Guide should not be used for any other purpose than dental surgical guides only.
Any deviation from this instruction for use may have negative effect on the chemical and physical quality of Varseowax Surgical Guide. In case of an allergic reaction, please contact a medical physician.

3. Safety instructions

VarseoWax Surgical Guide 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. Improper use and failure to observe the information can have a detrimental effect on the quality. Nitrile gloves, goggles and a coat must be worn as a means of protection when handling the resin.

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4. Side effects and precautions

Inhalation

Irritating to respiratory system. High atmospheric concentrations may lead to irritation of the respiratory tract, dizziness, headache and anesthetic effects.

Skin contact

May cause sensitization by skin contact. Irritating to skin, repeated and/or prolonged contact may cause dermatitis.

Eye contact

High vapor concentration may cause irritation.

Ingestion
Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

Protection
Wear protection when handling VarseoWax Surgical Guide. Protective glasses and nitrile gloves are advised. Information about the handling of the product can be found in the safety datasheet, which is available on the BEGO DownloadCenter www.bego.com. However, we cannot completely exclude the possibility of personal reactions to individual components in isolated cases. In such cases, the respective user should discontinue use of the VarseoWax Surgical Guide. If reactions or allergies occur when it comes into contact with the patient, the practitioner should cease using the material.

WARNING

Information on hazards as per MSDS
- Causes skin irritations
- May cause an allergic skin reaction
- Cause serious eye irritation
- May cause respiratory irritation
- May cause long lasting harmful effect to aquatic life

Safety instructions as per MSDS
- Avoid breathing spray
- Wear protective gloves/eye protection
- Call a POISON CENTER/doctor if you feel unwell
- If skin irritation or rash occurs: Get medical advice/attention
- If eye irritation persists: Get medical advice/attention
- Dispose of contents/container in accordance with local and national regulations

Contains:
Poly(oxy-1,2-ethanediyl), alpha, alpha'-[(1-methylethylidene))di-4 1-phenylene]bis[omega-[(2-methyl-1-oxo-2-propenyl)oxy], phenyl-bis(2,4,6-trimethylbenzoyl)-phosphine oxide

5. General information on handling

Delivery
VarseoWax Surgical Guide is supplied in light-tight, sealed bottles.
The filling quantities are:
- REF 41012 = 1 kg
- REF 41032 = 0.5 kg

Please check the following points on receipt of the goods:
- Integrity of the bottle/pack
- Quantity
- Shipping documents and designation

Storage
VarseoWax Surgical Guide 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 +5 °C and does not exceed +35 °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

VarseoWax Surgical Guide 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 equipment instructions for use.

Note: Ensure a minimum wall thickness of 3 mm when designing!

Note: The drilling templates should only be printed horizontally with the fitting surface facing upwards!

For further information on waxing up and processing, please refer to the guidelines on the production of drilling templates using the 3D printing method (REF 81752).

Please wear protective gloves (nitrile gloves), protective clothing, goggles and/or face protection during processing!
The ideal working temperature range for VarseoWax Surgical Guide is between 20 and 30 °C. The material must be shaken thoroughly for approx. 5 min before being poured into the clean Varseo container. If not shaken sufficiently, this can lead to colour deviations in the template material. 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 instructions for use of the Varseo printer. Before starting the printing procedure, the VarseoWax Surgical Guide must be mixed so as to form a homogeneous mixture. Insufficient mixing can lead to colour deviations within the drilling template. Varseo enables automatic mixing before each printing procedure, which is started by preselecting the mix mode in the Varseo printer program. Alternatively, mixing can be performed manually by moving the stamp up and down slowly five times.

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

1. Clean the print object for 3 min in a reusable ethanol solution (96 %) in an unheated ultrasonic bath.
2. The pre-cleand print object must be cleaned thoroughly for 2 min using a fresh ethanol solution (96 %). Ideally, this is done by spraying the print object using a spray flask in order to rinse off any remaining resin residue. The entire cleaning process should not take longer than
   5 minutes as this could otherwise have a detrimental effect on the print objects. After cleaning, the print object is dried using compressed air, if possible under suction. If there is liquid resin still adhering to the print object, this can be removed without trace by spraying again with ethanol (96 %) and drying once more.

Finishing
Following this, the support structures are removed. To this end, either a cutting wheel or side cutters can be used. It must be ensured that the printed object is not deformed!
In order to achieve the desired material properties, avoid deformation and guarantee mechanical strength and biocompatibility, the thoroughly cleaned print objects must be post-cured.

Note: In order to guarantee the required precision and avoid deformation, do **not** store printed objects for extended periods of time without post-curing!

The curing times may vary depending on the lamp output. The final properties of the print object depend on the post-curing process. The final material properties are achieved using a light polymerisation unit with the following performance data: a xenon stroboscopic lamp, flash frequency 20 Hz, light spectrum 390-540 nm (e.g., HiLite Power).

Post-curing		
Material	**Time [min]**	**Wave length [nm]**
VarseoWax Surgical Guide	7.5	390–540

Recommended post-curing process step by step:

1. Post-cure for 1.5 minutes.
2. Finish the object and check the accuracy of fit on the model.
3. Insert the drill sleeves. Apply a thin layer of liquid VarseoWax Surgical Guide material to the exterior of the drill sleeves with a brush to secure them in place. When doing so, ensure that no material reaches the inside of the sleeves. If necessary, these should be checked again for patency once hardened.
4. Post-cure the object for 2 x 3 minutes (without model). Please turn it and, if applicable, allow it to cool between post-curing procedures.

Note: The times given only apply to regularly maintained equipment which guarantee a corresponding light intensity. The times may vary (be extended) for unmaintained and defective equipment.

7. Storage and transportation of printed objects

The fully cured print objects are ideally stored at room temperature away from light and transported in a suitable, light-tight transport box!

8. Cleaning

Fully cured drilling templates made from VarseoWax Surgical Guide can be easily cleaned and disinfected, e.g., using ethanol.

9. 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.

10. Material parameters and scope of delivery

Physical data			
Colour	transparent blue	Flexural modulus	≥ 1,500 MPa
Density	approx. 1.12 g/cm³	Layer thickness	100 µm
Viscosity	approx.1,100 mPa*s	Charpy impact strength	≥ 3 kJ/m²
Flexural strength	≥ 50 MPa	Wavelength	405 nm

Scope of delivery	Contents	Unit	Qty	REF
VarseoWax Surgical Guide	1 kg	bottle	1	41012
VarseoWax Surgical Guide	0.5 kg	bottle	1	41032

11. Equipment

VarseoWax Surgical Guide has been designed for use in the Varseo printer from BEGO Bremer Goldschlägerei Wilhelm-Herbst GmbH & Co KG.

12. Label symbols

Manufacturer

Consult instructions for use

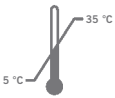
Batch code

Use by date

Catalogue number

Warning

Protect from sunlight



Storage and transport temperature

CE mark

For professional use only

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