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VarseoWax MODEL

GEBRAUCHSANWEISUNG
INSTRUCTIONS FOR USE
INSTRUCTIONS D'UTILISATION
INSTRUCCIONES DE USO
ISTRUZIONI PER L'USO
ІНСТРУКЦІЯ ПО ПРИМЕНЕННЮ

Partners in Progress



VarseoWax Model

Resin for the 3D printing of dental models.

1. Intended use/Indication

VarseoWax Model is an acrylic acid-based monomer for the production of 3D printed dental master models. Suitable for printing of all types of dental models.

2. Contraindications

VarseoWax Model should not be used for any purposes other than the production of dental master models. Any processing which deviates from that described in the instructions for use can have negative consequences on the chemical and physical quality of VarseoWax Model. Please contact a practitioner/doctor if an allergic reaction or intolerance occurs.

3. Safety instructions

VarseoWax Model 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, 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 yet. The safety and care instructions set down in the VarseoWax Model 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 VarseoWax Model as auxiliary equipment for food and drinks applications.

4. Side effects and precautions

Inhalation

Irritates the respiratory organs. High concentrations can lead to irritation of the respiratory passages, dizziness, headaches and loss of consciousness.

Skin contact

Sensitisation or irritation are possible from contact with the skin. Repeated and/or extended skin contact can cause inflammations.

Eye contact

High air concentrations can lead to eye irritations.

Swallowing

Low oral toxicity; ingestion can, however, lead to irritation of the gastrointestinal tract.

Precautions/Protection

Protective clothing must be worn when handling VarseoWax Model. 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 VarseoWax Model.



WARNING

Information on hazards as per MSDS

- Causes skin irritation
- May cause an allergic skin reaction
- Causes serious eye irritation
- May cause respiratory irritation
- May cause long lasting harmful effects to aquatic life

Safety instructions as per MSDS

- Avoid inhaling aerosol
- Wear protective gloves/eye protection
- Call a POISON CENTRE or doctor/physician if you feel unwell
- If skin irritation/rash occurs: get medical advice/attention
- If eye irritation persists: get medical advice/attention
- Dispose of contents/container as per 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 Model is supplied in light-tight, sealed bottles.

Filling quantity:

- REF 41010 = 1 kg

Please check the following points on receipt of the goods:

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

Storage

VarseoWax Model 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 Model 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 respective equipment. For further information on waxing up and processing, please refer to the guidelines on the production of models using the 3D printing method*.

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

The ideal working temperature range for VarseoWax Model 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 inhomogeneities within the model and/or to deviations in the colour of the model or dies. 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 respective Varseo printer instructions for use. **Before starting any printing procedure, VarseoWax Model must be mixed so as to form a homogeneous mixture. Before each print job, check that there are no solids (fillers) on the cartridge film. Deposited solids can have a detrimental effect on the printing results.** The resin can be stirred using the blank cards from BEGO (REF 19551). Alternatively, a silicone spatula can also be used. Avoid using sharp objects such as metal spatulas in order not to damage the film!

Subsequent processing

On completion of printing, the print objects are detached from the build platform by actuating the ejector** and/or 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.

* The waxing-up software shown as an example in the guidelines is 3Shape; useful tips for exocad users can be found in the “exocad wiki” at wiki.exocad.com

** Varseo and Varseo L cartridges

1. Clean the print object for 3 min in a reusable ethanol solution (96 %) in an **unheated** ultrasonic bath.
2. The precleaned print object must be cleaned thoroughly for 2 min using a fresh ethanol (96 %) solution. 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 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 completely removed by spraying again with ethanol (96 %) and re-drying.

Finishing

Following this, the support structures, if present, 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! The completely cleaned print objects must be post-cured to attain the required material properties.

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: 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).

VarseoWax Model			
Post-curing device	BEGO Otofash	HiLite Power	Note
Flash	2 x 2,000	–	Please turn between the two curing procedures
Time [seconds]	–	2 x 180	

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

7. Storage and transportation of printed objects

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

When not being used or when being stored by the user, the models must be stored away from light to prevent changes in form!

Information on the use of printed and light-cured models made from VarseoWax Model

1. Models can be insulated (Isocera) to prevent the wax from adhering.
2. Models can be duplicated with silicone (e.g., WiroSil^{plus}) or duplicating gel (e.g., Castogel; WiroGel).
3. It is possible to produce deep drawing copings (Adapta) on stump models.
4. It is possible to produce deep drawing splints on models with all teeth as a one-off application.

Note: Avoid overheating the foil when deep drawing plastic foils!

5. Can be repaired or expanded by partially applying original material in a droplet shape.

Note: In case of extensive imperfections, cracks or fractures, refabrication is advisable.

8. Cleaning in the dental laboratory

Fully cured models made from VarseoWax Model can be easily cleaned by means of steam cleaning (Triton) or under running water.

Note: Scalding with boiling water (100 °C) is contraindicated as it can deform the models!

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 properties and scope of delivery

Physical data			
Colour	yellow-brown	Flexural modulus	≥ 1.500 MPa
Density	approx. 1.12 g/cm ³	Layer thickness	50 µm
Viscosity	1,100 mPa*s	Charpy impact strength	≥ 3 kJ/m ²
Flexural strength	≥ 50 MPa	Wavelength	405 nm

Delivery form				
	Contents	Presentation	Qty	REF
VarseoWax Model	1 kg	bottle	1	41010

11. Equipment

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

12. Label symbols



Manufacturer



Batch code



Catalogue number



Keep away from sunlight



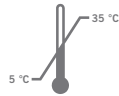
Consult instructions for use



Use by date



Caution



Temperatur limit



For professional use only

www.bego.com



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