

Information for
practitioners

VarseoSmile Crown^{plus}

THE HYBRID MATERIAL FOR 3D PRINTING
OF PERMANENT RESTORATIONS

Partners in Progress



VarseoSmile Crown^{plus}

The tooth-colored, ceramic filled hybrid material for 3D printing of permanent single crowns, inlays, onlays, and veneers

Indication range

The VarseoSmile Crown^{plus} material is used for 3D printing of permanent restorations such as single crowns, inlays, onlays, and veneers for anterior and posterior areas including occlusal surfaces.

- Extensive scientific studies by renowned universities and institutes confirm the excellent features of the restorations made of VarseoSmile Crown^{plus}

Shades

VarseoSmile Crown^{plus} is available in seven shades according to the VITA^{*} classical shade system: A1 Dentin / A2 Dentin / A3 Dentin / B1 Dentin / B3 Dentin / C2 Dentin / D3 Dentin.

Advantages for the practitioner

- The chemical and mechanical properties of the material are specially adapted to dental applications
- Easy to grind and polish by using customary tools
- FDA 510(k) cleared and fulfills all the requirements for a Class II medical device^{**}
- Thanks to the full integration into the digital workflow and the low material costs, a fast supply option with an excellent price-performance ratio is made possible
- Scientifically proven high composite strength with commercially available luting agents on titanium adhesion bases and abutments
- Clear visibility of restorations made of VarseoSmile Crown^{plus} on radiographs
- Secure fixing of printed objects in the patient's mouth with only minimal effort to prepare the contact surfaces

Advantages for the patient

- Excellent aesthetics thanks to a balanced ratio of opacity and translucency
- Fluorescence of the printed objects resembles that of the natural tooth
- Low tendency to age and discolor thanks to very low water absorption and water solubility
- Low plaque accumulation due to smooth surface
- High comfort thanks to low cold and heat sensitivity
- Antagonist-friendly material with mechanical buffering effect – ideal for implant-supported crowns
- Minimized formation of secondary caries thanks to a high adhesive bond with luting composites
- Certified biocompatibility

Luting

Permanent restorations made of VarseoSmile Crown^{plus} can be attached with commercially available self-adhesive cements (e.g. RelyX Unicem^{*}, 3M Espe^{*}) or composite cements with primer (e.g. Variolink Esthetic DC^{*} and Monobond Plus^{*}, Ivoclar Vivadent^{*} and Panavia V5^{*}, Kuraray Noritake^{*} for titanium adhesive bases) to be fixed. Observe the instructions for use of the luting agent.

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

** Medical device as defined by section 201(h) of the Food, Drug & Cosmetic Act

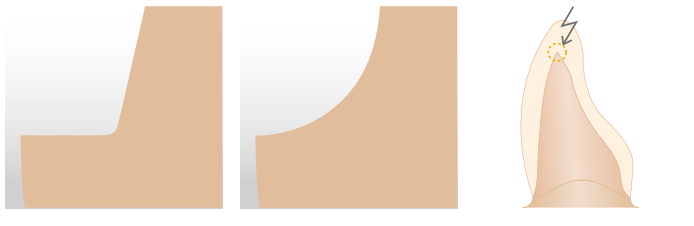
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Preparation

In order to ensure the successful production of restorations from VarseoSmile Crown^{plus} the following points must be taken into account prior to preparation:

- The preparation boundaries must be clearly visible
- In terms of the preparation depth, the minimum wall thicknesses for the restoration of 1 mm must be observed
- A chamfer or step preparation is recommended

As a rule, anatomically reduced preparation is recommended. Special care must be taken to ensure that no sharp angles or edges are created in order to avoid stress peaks in the frame material. These should be broken off before taking the impression using a suitable instrument, e.g., a flexible plastic diamond wheel.



Step preparation

Chamfer preparation

Avoidance of sharp edges

Technical specifications

Color	A1, A2, A3, B1, B3, C2, D3
Density	approx. 1.4 – 1.5 g/cm ³
Viscosity	2,500 – 6,000 mPa·s
Flexural strength	116 – 150 MPa*
Flexural modulus	4,090 MPa
Hardness	≥ 90 Shore D
Water solubility	< 1 µg/mm ³
Water sorption	< 12 µg/mm ³
Layer thickness	50 µm
Wavelength	385 nm and 405 nm

Chemical composition

Esterification products of 4.4'-isopropylidiphenol, ethoxylated and 2-methyl-prop-2enoic acid. Silanized dental glass, methyl benzoylformate, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide.

Total content of inorganic fillers (particle size 0.7 µm) is 30–50 % by mass.



* See study "Effects of additional UV light curing processes" under www.bego.com

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Detailed product information:



Scientific studies:



Compatibility Overview
3D Printers and
BEGO Varseo Materials:



Free 3D Printed
VarseoSmile Crown^{plus}
Sample:



More BEGO
3D printing materials:



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