

VITAVM[®]13

Product information



VITA shade determination

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue 06.17

VITA – perfect match.

VITA

For veneering metal substructures
in the conventional CTE range.
Available in VITA SYSTEM 3D-MASTER
and VITA classical A1–D4 shades.

VITAVM.13 Perfectly matched with all indications

Veneering Material · VITAVM®13

available in VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades



Matched with all alloys

high gold content



reduced gold content



palladium-based



precious metal-free



VITA VM 13 is a highly-esthetic, fine-structure feldspar ceramic that is perfectly adapted to the CTE value of conventional bonding alloys (approx. 13.8 – 15.2 $\mu\text{m}/\text{mK}$).

Regardless of whether the conventional alloys are cast, milled or sintered.

VITA VM 13 provides a genuine alternative to all-ceramics – and is right at home wherever the masking effect of a metal framework is required.

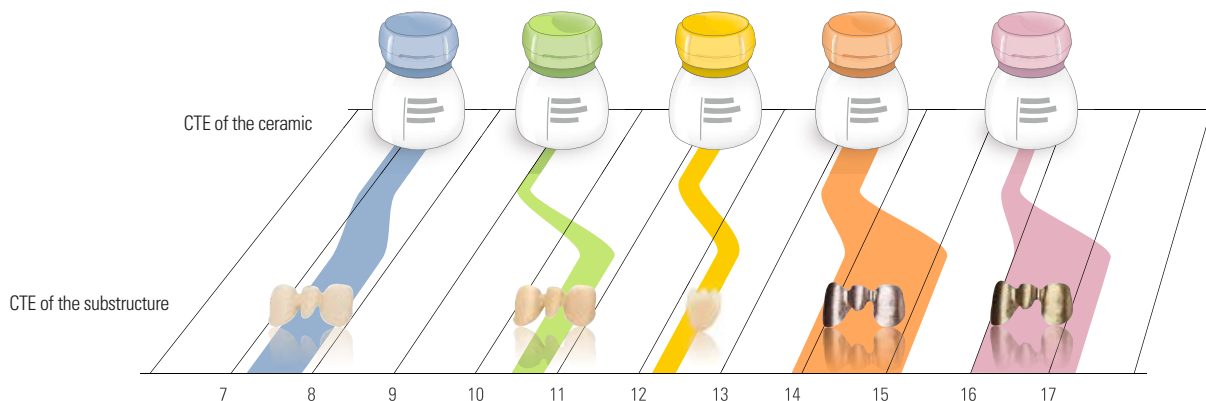
The firing temperature (880°C, dentin firing) provides enormous processing reliability, particularly for alloys with a low solidus temperature (<1100°C).

VITA VM 13 is a high-quality system component provided by the innovative VITA VM concept – the universal solution for all common indications. Metal-ceramics, all-ceramics or composite: the possibilities are endless!

Your benefits at a glance:

- Natural shade and light effects thanks to the fine structure
- Comprehensive range of additional materials for excellent processing
- Can be individualized using VITA AKZENT Plus and VITA INTERNO
- Minimum shrinkage behavior for accurate firing
- Excellent modeling characteristics for fast and accurate application of the ceramic
- Efficient and cost-effective processing
- Process reliability thanks to long-standing experience
- Available in VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades

VITAVM.13 Reliable use thanks to unmistakable classification



Veneering material	Substructure material
VITA VM 7 CTE (25–500°C) $6.9\text{--}7.3 \cdot 10^{-6} \cdot \text{K}^{-1}$	special fine-structure feldspar veneering ceramic for all-ceramic sub-structure materials in the CTE range of 7.2–7.8 (made from Al_2O_3)
VITA TITANIUM PORCELAIN CTE (25–500°C) $8.2\text{--}8.9 \cdot 10^{-6} \cdot \text{K}^{-1}$	for titanium and titanium alloys Titanium CTE (25–500°C), approx. $9.6 \cdot 10^{-6} \cdot \text{K}^{-1}$ $\text{Ti}_6\text{Al}_4\text{V}$ CTE (25–500°C), approx. $10.2 \cdot 10^{-6} \cdot \text{K}^{-1}$
VITA VM 9 CTE (25–500°C) $9.0\text{--}9.2 \cdot 10^{-6} \cdot \text{K}^{-1}$	VITA YZ CTE (25–500°C) approx. $10.5 \cdot 10^{-6} \cdot \text{K}^{-1}$ VITABLOCS CTE (25–500°C) approx. $9.4 \cdot 10^{-6} \cdot \text{K}^{-1}$ VITA PM 9 CTE (25–500°C) $9.0\text{--}9.5 \cdot 10^{-6} \cdot \text{K}^{-1}$
VITA VM 11 CTE (25–500°C) $11.2\text{--}11.6 \cdot 10^{-6} \cdot \text{K}^{-1}$	VITA SUPRINITY PC Zirconia reinforced lithium silicate glass ceramic CTE (25–600°C) approx. $12.3 \cdot 10^{-6} \cdot \text{K}^{-1}$
VITA VM 13 CTE (25–500°C) $13.1\text{--}13.6 \cdot 10^{-6} \cdot \text{K}^{-1}$	High gold content, reduced precious metal content, palladium based and non-precious alloys CTE (25–600°C) $13.8\text{--}15.2 \cdot 10^{-6} \cdot \text{K}^{-1}$ *
VITA VM 15 CTE (25–500°C) $15.5\text{--}15.7 \cdot 10^{-6} \cdot \text{K}^{-1}$	Multi-indication alloys (especially eco alloys) CTE (25–600°C) $16.0\text{--}17.3 \cdot 10^{-6} \cdot \text{K}^{-1}$ *

* visit the download section of our website for more information about alloys

VITAVM[®]13 Matched additional materials for top-quality individualization



Example of an aged tooth with lifelike appearance and effect of depth. This tooth was layered with BASE DENTINE, ENAMEL and individual additional materials.

VITAVM[®]13 EFFECT OPAL

To prepare bluish effects on the surface with opal shimmer

VITAVM[®]13 BASE DENTINE 50% + VITA INTERNO[®] 50%

To create incisal characteristics and discoloration

VITAVM[®]13 EFFECT ENAMEL

For warm, yellow translucency in the central area of the tooth

VITAVM[®]13 ENAMEL

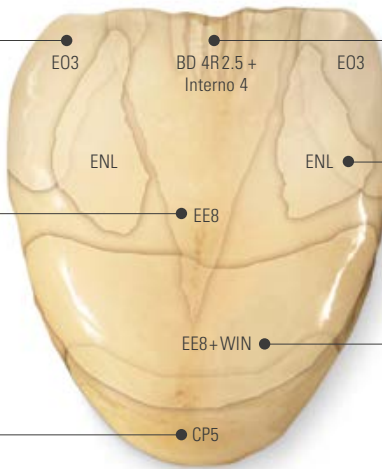
For brightening the mesial and distal areas

VITAVM[®]13 CHROMA PLUS

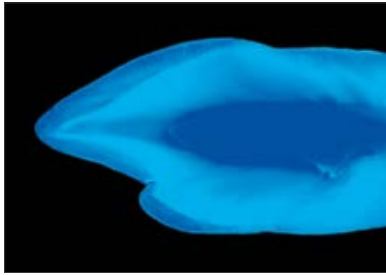
To increase the saturation in the cervical area

VITAVM[®]13 EFFECT ENAMEL 50% + WINDOW 50%

To increase the effect of depth in the body area with a reddish effect



VITAVM.13 Natural esthetics



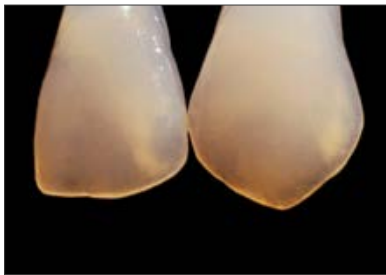
Vivid play of colors with VITAVM.13

The objective of any esthetic dental restoration is the reproduction of the fluorescence and opalescence of natural teeth. Like all VITA VM materials, VITA VM 13 excels in its refraction and reflection behavior which can be compared to that of enamel.

The picture taken under UV light clearly shows that different levels of fluorescence are found in natural teeth.

Numerous VITA VM materials contain pigments which add fluorescence to the restorations. The use of fluorescent and opalescent additional materials leads to individual and esthetically appealing results.

VITA VM EFFECT LINER and VITA VM MAMELON materials, for example, feature particularly distinctive fluorescence.

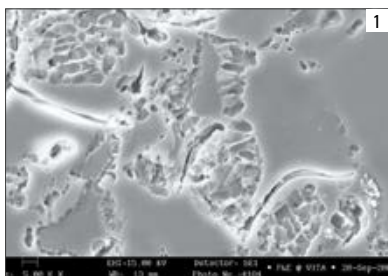


Picture taken at daylight: abundance of variations of opal effects

The VITA VM EFFECT OPAL materials were especially developed to create the opal effect found in the surface of translucent and young teeth.

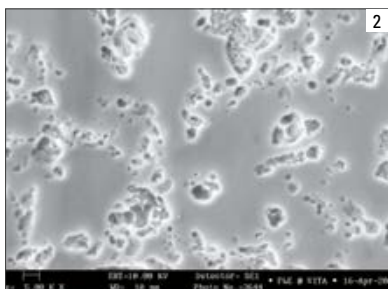


VITAVM.13 Homogeneous surface



The conventional metal ceramic

The etched surface reveals agglomerates of leucite crystals in the glass phase. The differences in the CTE of the leucite agglomerates and the glass phase may result in stress cracks.



The fine difference

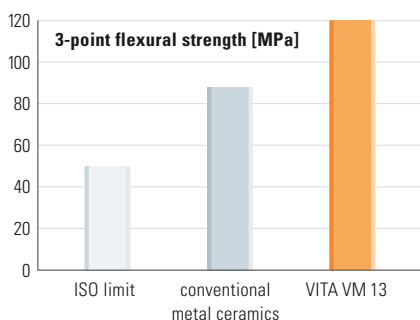
With VITA VM 13, a ceramic has been developed which clearly reveals more homogeneous distribution of the crystal and glass phases after firing than conventional ceramics. This innovative fine-structure is unrivaled and characteristic for all ceramic components of the VITAVM concept – for metal-ceramic or all-ceramic alike.

The etched surface of VITA VM 13 reveals particularly fine and homogeneous distribution of the leucite crystals in the glass phase. As a result, the formation of stress cracks is avoided and a smooth and perfectly dense surface is created, which provides VITA VM 13 with excellent milling and polishing properties. Moreover the accumulation of plaque on the ceramic surface is considerably reduced and easy care and cleaning of restorations are enabled.

Fig. 1: SEM image of the surface of a conventional metal ceramic (magnification 5000 x)

Fig. 2: SEM image of the surface of VITA VM 13 (magnification 5000 x).

The low solubility also ensures high resistance in the oral environment and a prolonged period of wearing.



Improved physical properties

Compared to conventional metal ceramics, VITA VM 13 features a variety of improved physical properties. These include, among others, the flexural strength, bonding strength and thermal resistance with lower solubility in acids.

3-point flexural strength of VITA VM 13 compared with that of a conventional metal ceramic and the ISO limit according to ISO 6872.

VITAVM.13 Enamel-like abrasion behavior

All fine-structure ceramics of VITA are convincing because of their excellent enamel-like properties, which is documented by the studies of the Dental Clinic of the University of Zurich and the Goldman School of Medicine of the University of Boston carried out with VITA VM 7 and VITA VM 9.



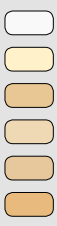


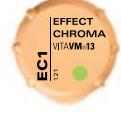


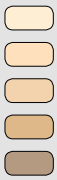



Literature: E. A. McLaren, R. A. Giordano II, R. Pober, B. Abozenada „Zweiphasige Vollglas Verblendkeramik“, (Quintessenz Zahntech 30, 1, 32 – 45 [2004])

Advantages of the innovative fine-structure ceramic:















- Excellent bonding ensures reliable results
- Optimal processing characteristics such as superior stability, minimized shrinkage behavior and high edge stability
- Outstanding firing stability even after several firing processes
- Excellent grinding and polishing properties, especially in situ
- Homogeneous and dense surfaces
- Proven similarity with enamel






VITAVM.13 Additional materials

<p>VITA VM 13 EFFECT LINER</p> <ul style="list-style-type: none"> – to control the fluorescence from the depth of the restoration – universally suitable to support and intensify the base shade – applied in the gingival area, they enhance the distribution of light 		<table border="1"> <tbody> <tr> <td>EL1</td> <td>snow</td> <td>white</td> </tr> <tr> <td>EL2</td> <td>cream</td> <td>beige</td> </tr> <tr> <td>EL3</td> <td>tabac</td> <td>brown</td> </tr> <tr> <td>EL4</td> <td>golden fleece</td> <td>yellow</td> </tr> <tr> <td>EL5</td> <td>papaya</td> <td>orange</td> </tr> <tr> <td>EL6</td> <td>sesame</td> <td>green-yellow</td> </tr> </tbody> </table>	EL1	snow	white	EL2	cream	beige	EL3	tabac	brown	EL4	golden fleece	yellow	EL5	papaya	orange	EL6	sesame	green-yellow																
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<p>VITA VM 13 MARGIN</p> <ul style="list-style-type: none"> – to create an esthetic transition in the case of a labially shortened metal coping – after the application, the plastified MARGIN material must be hardened through the supply of heat; it is recommended to use a hair-dryer or radiated heat from the furnace to stabilize the shoulder 		<table border="1"> <tbody> <tr> <td>M1</td> <td>icy beige</td> <td>white</td> </tr> <tr> <td>M4</td> <td>wheat</td> <td>yellow</td> </tr> <tr> <td>M5</td> <td>amber</td> <td>amber</td> </tr> <tr> <td>M7</td> <td>seashell</td> <td>light beige</td> </tr> <tr> <td>M8</td> <td>tan</td> <td>pastel-brown</td> </tr> <tr> <td>M9</td> <td>beach</td> <td>light orange</td> </tr> </tbody> </table>	M1	icy beige	white	M4	wheat	yellow	M5	amber	amber	M7	seashell	light beige	M8	tan	pastel-brown	M9	beach	light orange																
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<p>VITA VM 13 EFFECT CHROMA</p> <ul style="list-style-type: none"> – color-intensive modifier porcelains – to accentuate certain color areas of the tooth – to vary the lightness value in the neck, dentine and enamel areas 		<table border="1"> <tbody> <tr> <td>EC1</td> <td>ghost</td> <td>white</td> </tr> <tr> <td>EC2</td> <td>linen</td> <td>sand-beige</td> </tr> <tr> <td>EC3</td> <td>pale banana</td> <td>light yellow</td> </tr> <tr> <td>EC4</td> <td>lemon drop</td> <td>tender lemon yellow</td> </tr> <tr> <td>EC5</td> <td>golden rod</td> <td>light orange</td> </tr> <tr> <td>EC6</td> <td>sunflower</td> <td>orange</td> </tr> <tr> <td>EC7</td> <td>light salmon</td> <td>pink</td> </tr> <tr> <td>EC8</td> <td>toffee</td> <td>beige-brown</td> </tr> <tr> <td>EC9</td> <td>doe</td> <td>brown</td> </tr> <tr> <td>EC10</td> <td>larch</td> <td>green-brown</td> </tr> <tr> <td>EC11</td> <td>gravel</td> <td>green-grey</td> </tr> </tbody> </table>	EC1	ghost	white	EC2	linen	sand-beige	EC3	pale banana	light yellow	EC4	lemon drop	tender lemon yellow	EC5	golden rod	light orange	EC6	sunflower	orange	EC7	light salmon	pink	EC8	toffee	beige-brown	EC9	doe	brown	EC10	larch	green-brown	EC11	gravel	green-grey	
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<p>VITA VM 13 MAMELON</p> <ul style="list-style-type: none"> – highly fluorescent porcelain which is mainly used in the incisal area – for shade characterization between incisal edge and dentine 		<table border="1"> <tbody> <tr> <td>MM1</td> <td>ecru</td> <td>beige</td> </tr> <tr> <td>MM2</td> <td>mellow buff</td> <td>warm yellow-brown</td> </tr> <tr> <td>MM3</td> <td>peach puff</td> <td>tender orange</td> </tr> </tbody> </table>	MM1	ecru	beige	MM2	mellow buff	warm yellow-brown	MM3	peach puff	tender orange																									
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<p>VITA VM 13 CHROMA PLUS</p> <ul style="list-style-type: none"> – Chroma Plus materials can be used to achieve more intensive shade reproduction in the cervical region (especially with VITA classical A1–D4 shades) – in case of thin walls, they enhance the shade in an efficient manner 		<table border="1"> <tbody> <tr> <td>CP1</td> <td>ivory</td> <td>ivory</td> </tr> <tr> <td>CP2</td> <td>almond</td> <td>beige</td> </tr> <tr> <td>CP3</td> <td>moccasin</td> <td>light orange-brown</td> </tr> <tr> <td>CP4</td> <td>caramel</td> <td>orange</td> </tr> <tr> <td>CP5</td> <td>burlywood</td> <td>green-brown</td> </tr> </tbody> </table>	CP1	ivory	ivory	CP2	almond	beige	CP3	moccasin	light orange-brown	CP4	caramel	orange	CP5	burlywood	green-brown																			
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<p>VITA VM 13 CORRECTIVE</p> <ul style="list-style-type: none"> – with reduced firing temperature (830°C) for corrections after glaze firing – in three nuances for neck, dentine and enamel areas 		<table border="1"> <tbody> <tr> <td>COR1</td> <td>neutral</td> <td>neutral</td> </tr> <tr> <td>COR2</td> <td>sand</td> <td>beige</td> </tr> <tr> <td>COR3</td> <td>ochre</td> <td>brown</td> </tr> </tbody> </table>	COR1	neutral	neutral	COR2	sand	beige	COR3	ochre	brown																									
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VITAVM.13 Additional materials

<p>VITA VM 13 SUN OPAQUE</p> <ul style="list-style-type: none"> – for mixing the respective opaque shades – in three different nuances 		<p>S01</p>	<p>yellowish</p>	<p>yellowish</p>	
<p>VITA VM 13 SUN DENTINE</p> <ul style="list-style-type: none"> – for a "sunnier" and warmer shade result – to be used in the dentine and body area 		<p>SD1</p>	<p>sun light</p>	<p>light yellow</p>	
<p>VITA VM 13 EFFECT ENAMEL</p> <ul style="list-style-type: none"> – can be used for all enamel areas of the natural tooth – universally suitable translucent enamel effect materials – to achieve a natural effect of depth 		<p>EE1</p>	<p>mint cream</p>	<p>whitish-translucent</p>	
<p>VITA VM 13 EFFECT PEARL</p> <ul style="list-style-type: none"> – only suitable for effects on the surface, not for layering in – perfectly suitable for bleached restorations – to obtain nuances of yellow and red 		<p>EP1</p>	<p>pearl</p>	<p>shade in pastel-yellow</p>	
<p>VITA VM 13 EFFECT OPAL</p> <ul style="list-style-type: none"> – to create the opal effect in restorations of young and highly translucent teeth 		<p>E01</p>	<p>opal</p>	<p>neutral, universally suitable</p>	
<p>VITA VM 13 GINGIVA</p> <ul style="list-style-type: none"> – to restore the original gingival situation – are applied and fired during the first and / or second dentine firing – color nuances range from orange-red and reddish to brown-red 		<p>G1</p>	<p>rose</p>	<p>dusky pink</p>	
<p>VITA VM 13 COLOR OPAQUE</p> <ul style="list-style-type: none"> – shade-intensive opaque materials for the characterization of enamel and cervical areas 		<p>CO1</p>	<p>gold</p>	<p>orange</p>	





VITAVM[®]13 Modular and efficient arrangement of assortments

	<p>VITAVM[®]13 BASIC KIT* Basic assortment for BASIC layering (also available as BASIC KIT SMALL with reduced range of materials)</p>
	<p>VITAVM[®]13 BUILD UP KIT* Add-on assortment for BUILD UP layering (also available as BUILD UP KIT SMALL with reduced range of materials)</p>
	<p>VITAVM[®]13 CLASSICAL COLOR KIT Assortment for VITA VM 13 3D-MASTER customers who wish to add VITA classical shades A1–D4 shades to their assortment.</p>
	<p>VITAVM[®]13 PROFESSIONAL KIT** For incorporating all natural effects and characteristics (also available as PROFESSIONAL KIT SMALL with reduced range of materials)</p>
	<p>VITAVM[®]13 BLEACHED COLOR KIT Ultra-bright shades for the reproduction of bleached teeth</p>
	<p>VITAVM[®]13 GINGIVA KIT** Gingiva materials with natural effects</p>
	<p>VITAVM[®]13 MARGIN KIT** For ceramic shoulder design</p>

* Available in VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades.

** Can be used for VITA SYSTEM 3D-MASTER and VITA A1–D4 shades

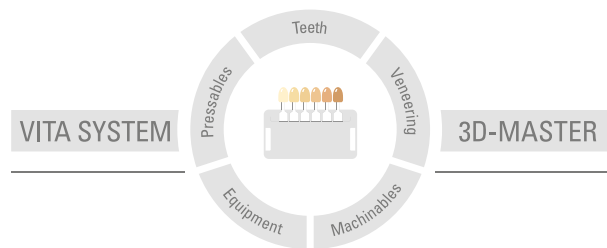
VITAVM.13 All from one experienced and competent partner

	<p>VITA Easyshade® V For digital shade determination, use VITA Easyshade Advance V, and for visual shade determination the VITA Linearguide 3D-MASTER or VITA classical A1–D4, for example.</p>
	<p>VITA VACUMAT® 6000 M furnace and VITA V60 i-Line® Ceramic firings should preferably be carried out with the VITA VACUMAT 6000 M premium furnace or with the versatile VITA V60 i-Line furnace.</p>
	<p>VITA AKZENT® Plus With VITA AKZENT PLUS stains, you can optimize the shade of all types of dental ceramic restorations simply and efficiently, regardless of the CTE of the restoration.</p>
	<p>VITA INTERNO® The materials offer the ability to create in-depth shade effects. Their high fluorescence adds very high luminosity to the shades.</p>

For more information visit www.vita-zahnfabrik.com

VITA VM 13 veneering material is available in VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades. Shade compatibility with all VITA 3D-MASTER and VITA classical materials is guaranteed.

With the unique VITA SYSTEM 3D-MASTER, all natural tooth shades can be systematically determined and perfectly reproduced.



Please note: Our products must be used in accordance with the instructions for use. We accept no liability for any damage resulting from incorrect handling or usage. The user is furthermore obliged to check the product before use with regard to its suitability for the intended area of application. We cannot accept any liability if the product is used in conjunction with materials and equipment from other manufacturers that are not compatible or not authorized for use with our product. Furthermore, our liability for the accuracy of this information is independent of the legal basis and, in as far as legally permissible, shall always be limited to the value as invoiced of the goods supplied, excluding value-added tax. In particular, as far as legally permissible, we do not assume any liability for loss of earnings, indirect damages, ensuing damages or for third-party claims against the purchaser. Claims for damages based on fault liability (culpa in contrahendo, breach of contract, unlawful acts, etc.) can only be made in the case of intent or gross negligence. The VITA Modulbox is not necessarily a component of the product.

Date of issue of this information: 06.17

After the publication of these information for use any previous versions become obsolete. The current version can be found at www.vita-zahnfabrik.com

VITA Zahnfabrik has been certified in accordance to the Medical Device Directive and the following products bear the CE mark  0124 :

VITAVM₁₃

The photos on page 5 were provided with the kind support of Mr. Claude Sieber.

VITA

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