

VITAVM[®]9

Working Instructions



VITA shade taking

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue: 08.13

VITA shade, VITA made.

VITA

For veneering zirconia substructures and for individualizing VITABLOCS and VITA PM 9 restorations. Available in VITA SYSTEM 3D-MASTER and VITA classical A1–D4 shades.

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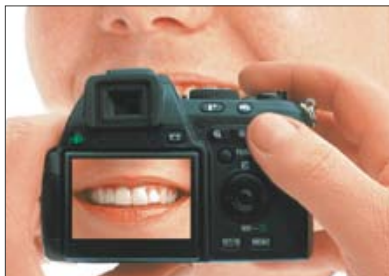
Competence for more than 80 years

Shade management is more than just shade determination. At VITA, shade management means incorporating our ever better solutions into a complete process. The key question we have always asked ourselves is: How can we improve shade determination and reproduction? By establishing standardized process steps to increase the efficiency. Today, dental specialists are expected to achieve better results while spending less time and money. It is this goal that brings us together.



VITA shade taking

The accurate determination of the basic shade of a tooth is the key prerequisite for patient acceptance. The basic shade is generally found in the dentine center (central to gingival area).



The determination of the effects

Natural teeth are unique and a perfect creation of nature. Therefore, after determining the base shade, details of a tooth (translucent zones or anomalies, for example) need to be recorded to obtain a perfect match. We recommend the use of a digital photo to analyze details or effects.



VITA shade communication

To ensure perfect reproduction of the determined shade, it is essential to ensure that all parameters are communicated accurately to the dental laboratory. Any misunderstanding leads to expensive and unnecessary extra work. For this reason we recommend using the color communication form to describe the basic shade and a digital photo for the analysis of effects or details. The software of VITA Easyshade provides a template to have all data on a single sheet – a laboratory communication form. This information will enable you to create a restoration that matches the remaining teeth perfectly in a quick and reliable manner.



VITA shade reproduction

The most important step in reproducing a tooth is to ensure that the determined tooth shade is accurately reproduced. Then the shade effects of the tooth can be reproduced to obtain a high-quality restoration. You can be sure that whichever VITA materials you choose, you will be able to achieve this objective without time-consuming mixing or testing.

VITA shade control

In the final step, qualitative shade evaluation no longer needs to be left to the subjective opinion of an individual. Within the VITA process, objective control of the final restoration is the most important prerequisite for ensuring satisfied patients and avoiding additional work.

VITA VM 9 has been designed as a special ceramic featuring a fine structure for partially yttrium-stabilized ZrO_2 substructures with a CTE of approx. $10.5 \cdot 10^{-6} \cdot K^{-1}$, such as VITA In-Ceram YZ. The material is also perfectly suited for individualizing VITABLOCS (see Working Instructions, No. 1219E) and for individualizing VITA PM 9 restorations.

Like all VITA VM materials, VITA VM 9 excels in its refraction and reflection behavior which can be compared to that of enamel. Accordingly, the BASE DENTINE and TRANSPA DENTINE porcelains which have been perfectly matched allow the fabrication of restorations with a highly natural appearance. The use of additional fluorescent and opalescent materials results in individual and esthetically appealing restorations.

A modified manufacturing process helped to create a new type of ceramic. Compared to conventional ceramics, the structure that is obtained after firing reveals particularly homogeneous distribution of the crystal and glass phase. This type of structure is described as a "fine structure".

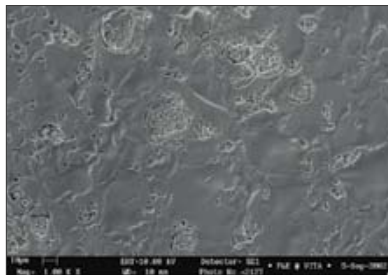


Fig. 1: SEM image of the surface of a ceramic with conventional structure (magnification 5000 x).

Fig. 1:

The etched surface (etched for 20 seconds with VITA CERAMICS ETCH) of a conventional ceramic shows agglomerations of leucite crystals of up to 30 μm in diameter. The differences between the CTE values of the leucite agglomerations and those of the glass phase can lead to stress cracks, which can be seen at the bright rims of the cracks in the photo.

Fig. 2:

The etched surface of VITA VM 9 (etched with VITA CERAMICS ETCH for 20 sec) reveals particularly fine distribution of the leucite crystals in the glass phase, which avoids the formation of stress cracks.

Good surface structure

The fine structure provides a number of benefits for dental technicians, dentists and patients alike. Thanks to the homogeneous, sealed surface, VITA VM 9 offers excellent grinding and polishing properties in situ to ensure smooth and perfectly sealed surfaces.

Accumulation of plaque on the ceramic surface is reduced considerably; hence easy care and cleaning of the high-quality restoration are supported.

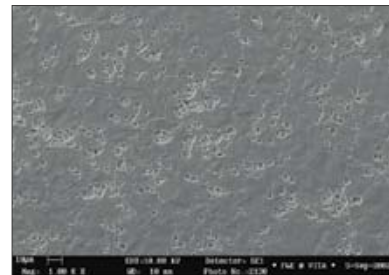
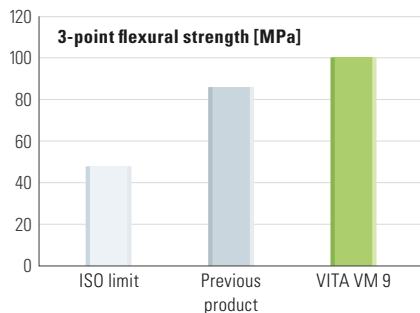


Fig. 2: SEM image of the etched surface of VITA VM 9 (magnification 5000 x).

Physical properties

In addition to the favorable homogeneous surface, VITA VM 9 features high flexural strength and very low solubility in acid.



Flexural strength

Flexural strength of VITA VM 9 compared with that of the previous product and the ISO limit according to ISO 6872.

VITAVM [®] 9 – Physical properties	Unit of measure	Value
CTE (25–500°C)	10 ⁻⁶ K ⁻¹	9.0–9.2
Softening point	°C	approx. 670
Transformation temperature	°C	approx. 600
Solubility in acid	µg/cm ²	approx. 10
Average particle size	µm (d ₅₀)	approx. 18
3-point flexural strength	MPa	approx. 100

Enamel-like properties

In a study carried out by McLaren (UCLA School of Dentistry, UCLA Center for Esthetic Dentistry, Los Angeles, CA) and Giordano (Goldman School of Dental Medicine, University of Boston, MA) VITA VM 9 showed a similar abrasion behavior as natural enamel.

Literature: E. A. McLaren, DDS; R. A. Giordano II, DMD, DMedSc „Zirconia Based Ceramics: Material Properties, Esthetics and Layering Technique of a new Veneering Porcelain, VM 9“, (Quintessenz of Dental Technology 28, 99–111 [2005])

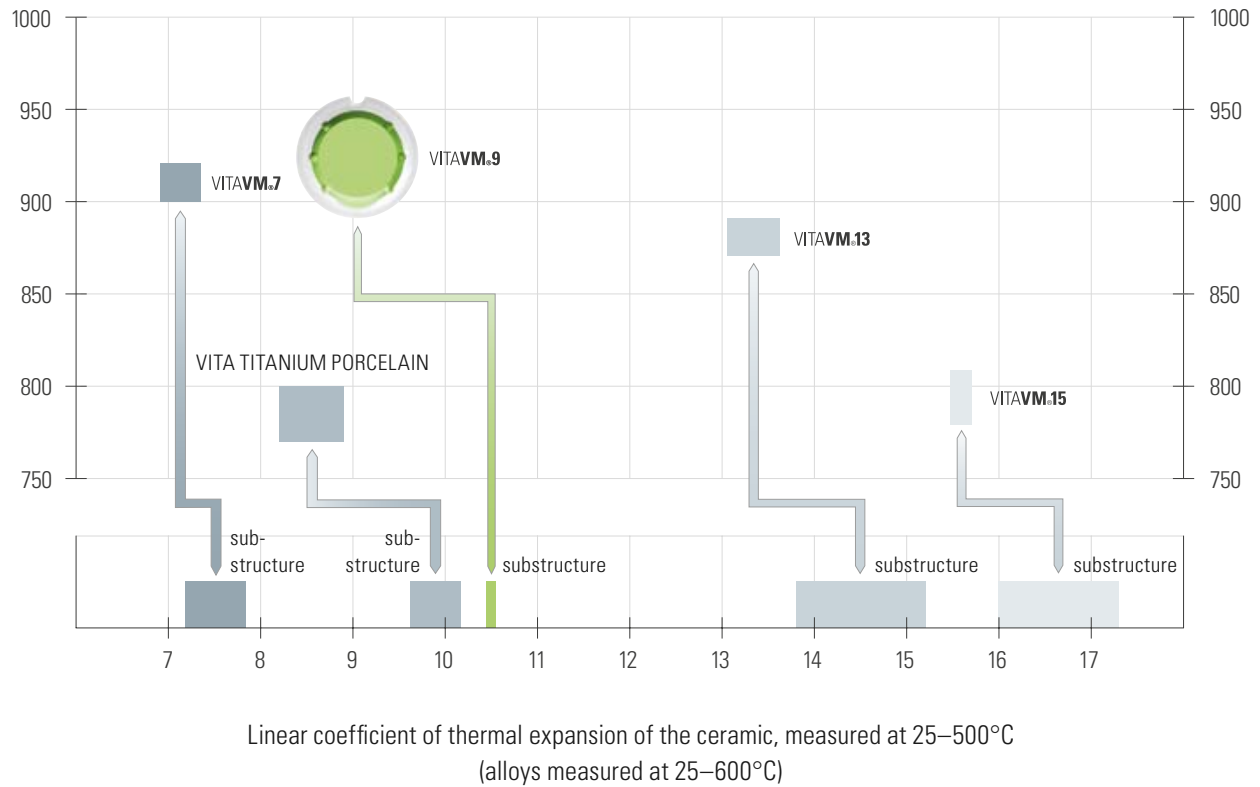
⚠ Note: If the processing instructions and the guidelines on substructure design recommended by VITA are observed, VITA VM 9 is suitable for all substructures made from 3Y-TZP (-A). Since the function depends on a variety of parameters, only the user can ensure the quality in the individual case.

- for veneering zirconia substructure materials in the CTE range of approx. 10.5, such as VITA In-Ceram YZ/ VITA YZ HT
- for individualizing VITABLOCS
- for individualizing VITA PM 9 restorations

Firing temperature
of ceramic [°C]

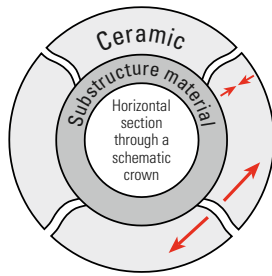
Linear coefficient of thermal expansion of the ceramic, measured at 25–500°C

Firing temperature
of ceramic [°C]

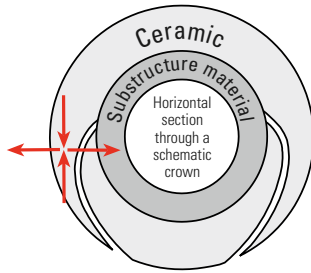


VITA VM 7 CTE (25–500°C) $6.9\text{--}7.3 \cdot 10^{-6} \cdot \text{K}^{-1}$	VITA In-Ceram ALUMINA, CTE (25–500°C) $7.2\text{--}7.6 \cdot 10^{-6} \cdot \text{K}^{-1}$ VITA In-Ceram ZIRCONIA, CTE (25–500°C) $7.6\text{--}7.8 \cdot 10^{-6} \cdot \text{K}^{-1}$
VITA TITANIUM PORCELAIN CTE (25–500°C) $8.2\text{--}8.9 \cdot 10^{-6} \cdot \text{K}^{-1}$	for titanium and titanium alloys Titanium CTE (25–500°C), approx. $9.6 \cdot 10^{-6} \cdot \text{K}^{-1}$ Ti ₆ Al ₄ 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 In-Ceram YZ, CTE (25–500°C), approx. $10.5 \cdot 10^{-6} \cdot \text{K}^{-1}$ VITA YZ HT, 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 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 * CTE (25–600°C) $16.0\text{--}17.3 \cdot 10^{-6} \cdot \text{K}^{-1}$

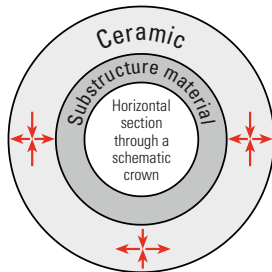
* visit the download section of our website for more information about alloys



If the CTE of the substructure material is considerably higher than the CTE of the veneering ceramic, tangential compressive stress will increase and form cracks that run almost parallel to the substructure. This may result in chipping.



If the CTE of the substructure material is considerably higher than the CTE of the veneering ceramic, tangential compressive stress will increase and form cracks that run almost parallel to the substructure. This may result in chipping.



The ideal tangential and radial tensile stress is ensured if the CTE of the ceramic has been optimally matched with the CTE of the substructure material.

Optimal preconditions are given if the veneering ceramic features a somewhat lower CTE value than the substructure material. Due to adhesive bonding, the ceramic must follow the thermal behavior of the substructure material. If cooled down, the ceramic is exposed to slight tangential compressive stress.

If a substructure material is veneered with ceramic, the layer thickness of the veneer is a decisive factor in addition to the CTE value. Accordingly, differences in strain (radial tensile stress) are obtained, which will grow in case of increasing layer thickness.

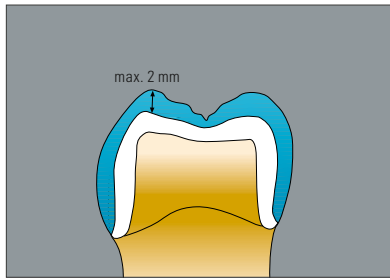
The firing result obtained with dental ceramics depends to a great extent on the individual user's firing procedure. The type of furnace, the location of the temperature sensor, the firing trays and the size of the workpiece during the firing cycles are decisive for the result of firing. Our application-technical recommendations for the firing temperatures (regardless of whether they have been provided orally, in writing or in the form of practical instructions) are based on extensive experience and tests. The user, however, should consider this information only as a reference. Should the surface quality or the degree of transparency or glaze not correspond to the result that is achieved under optimum conditions, the firing procedure must be adjusted correspondingly.

⚠ Note: Firing trays may also have significant influence on the result. All firing temperatures for VITA VM are based on the use of dark-colored ceramic firing trays. When using light-colored firing trays, the temperature may vary by 10–20°C - in some cases even by up to 40° - from the reference value given depending on the furnace that is used and needs to be adjusted correspondingly.

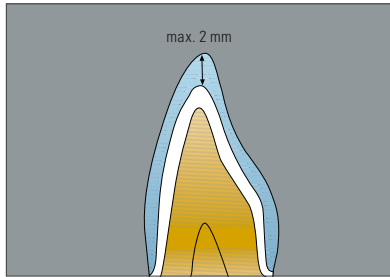
The crucial factors for the firing procedure are not the firing temperature displayed by the furnace but the appearance and the surface condition of the veneering ceramic after the firing process.



A slight luster of the ceramic surface is an evidence for correct firing. If the ceramic, however, appears to be milky and non-homogeneous, the firing temperature is too low. Approach the correct firing temperature in steps of 5–10°C.



Veneering premolars and molars



Veneering anterior teeth

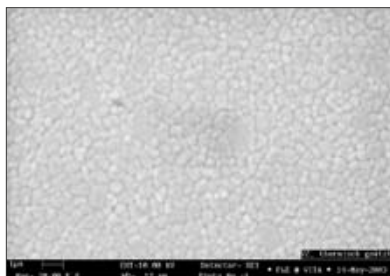
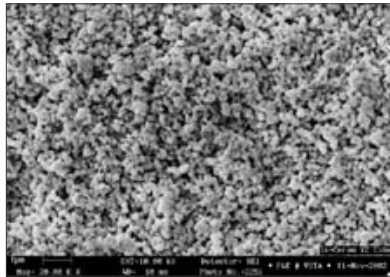
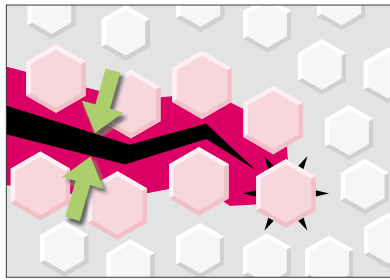
Zirconia crowns and bridge units to be veneered with ceramic must have a reduced anatomical size.

The wall thickness of crowns must be at least 0.5 mm and that of bridges must be at least 0.7 mm.

A table with details on further indications can be found in the Working Instructions for VITA In-Ceram YZ/VITA YZ HT (publication No. 1649).

Layer thicknesses for ceramics

When preparing a ceramic veneer, a uniform layer thickness across the entire surface to be veneered must be ensured. The entire thickness of the ceramic layer, however, should not exceed 2 mm (the optimum layer thickness ranges from 0.7 to 1.2 mm).



Zirconia (ZrO_2) is an oxide ceramic with many fascinating properties, such as its translucency in the case of thin wall thicknesses, its bright color and its outstanding biocompatibility. It is no coincidence that this material is frequently used in the field of implantology. In addition to this, it features a high degree of crack resistance which distinguishes it among oxide ceramics.

The latter results from the possibility of stabilizing ZrO_2 in its tetragonal high temperature phase through the appropriate addition (doping) of e.g. yttrium oxide. Only if external energy is supplied – as it occurs e.g. when a crack is formed (see fig.1) – individual ZrO_2 particles are transformed locally into their stable monoclinic phase at room temperature while their volume increases (see fig.1 - pink ZrO_2 particles). This procedure is described as transformation strengthening. The compressive stress that is formed in the structure (see arrows in fig. 1) prevents unhindered growth of a crack that would lead to the failure of the ceramic. This property is also reflected in the long life of zirconia under permanent loading.

VITA In-Ceram YZ/VITA YZ HT is porously presintered zirconia (see fig. 2) partially stabilized with yttrium oxide (Y-TZP, yttria stabilized tetragonal zirconia polycrystal). In this condition the blocks are easily machined and used to mill enlarged bridge and crown substructures using CAD/CAM techniques.

Shrinkage which occurs during the subsequent sintering process in a special high-temperature furnace (VITA ZYrcomat) is precisely accounted for. The end result: substructures with a high degree of strength and marginal accuracy which feature all the advantageous physical properties of zirconia.

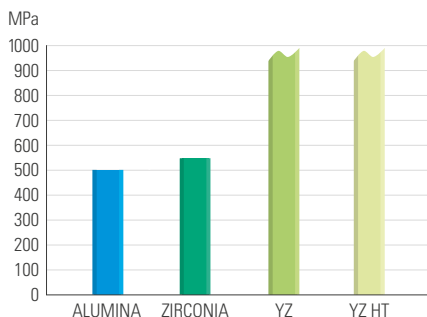


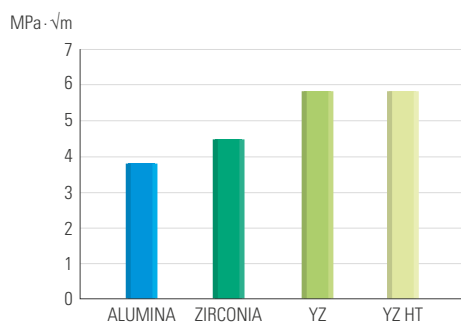
Fig. 1: Schematic diagram of the phase transformation process of ZrO_2

Fig. 2: SEM micrograph of the microstructure of sintered VITA In-Ceram YZ (magnification x 20,000)

Fig. 3: SEM micrograph of the microstructure of sintered VITA In-Ceram YZ HT (magnification x 20,000)

Fig. 4: Comparison of the 3-point flexural strength of various VITA oxide ceramics according to ISO 6872

Fig. 5: Comparison of the fracture toughness (SEVNB method) of various substructure materials



Mechanical surface treatment such as grinding with diamond tools and sandblasting may supply hypercritical quantities of energy to the zirconia substructure, which may result in deformation of large areas of the crystal lattice or even in the phase transition of ZrO_2 . As a consequence, complex stress can be formed at the interface of the veneer which may result in immediate failure or also in critical crack growth and consequential late damage to the restoration. This effect can be detected e.g. by radiographic phase analysis (fig.1). Compared with tetragonal ZrO_2 , monoclinic ZrO_2 features a lower CTE of approx. $7.5 \cdot 10^{-6} \cdot K^{-1}$ *

If the zirconia restoration is to be cemented using a phosphate monomer containing composite (e.g. PANAVIA), sandblasting of the adhesion surfaces with Al_2O_3 (max. 50 μm) at a pressure of ≤ 2.5 bar will create a permanent bond between the composite and the oxide ceramic.

* D.J. Green, R.H.J. Hannik, M.V. Swain: Transformation Toughening of Ceramics, CRC Press USA, 1989

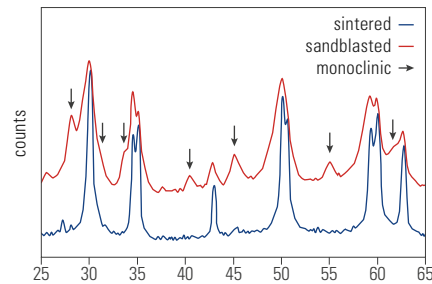


Fig. 1: X-ray diffraction diagram of a Y-TZP (blue) and its phase transition after sandblasting (red).

If reworking of sintered Y-TZP is required, the following basic guidelines must be observed:

- Grinding should only be performed using fine diamond tools. Cool with water and exert only little pressure when grinding.
- Areas exposed to considerable tensile stress during the clinical use, e.g. connectors of bridge structures, should not be ground.
- Final thermal treatment of the substructure is recommended to reverse any phase transitions. A single firing process at 1000°C and a holding time of 15 minutes are sufficient.

VITAVM®9 Expansion cooling when veneering zirconia substructures

Scientific studies and ongoing market observation have formed the basis of VITA Zahnfabrik's recommendations for decades in order to offer customers the best possible solution for dental restorations. New results confirm that great care is required particularly when veneering and processing zirconia substructures. As a result, the following procedures are recommended in order to offer even more safety:

Owing to the poor thermal conductivity of both materials (Y-TZP and veneering ceramic), higher residual stress can occur in this compound system than is known in the case of metal ceramics. This residual thermal stress in the veneering ceramic, in particular in the case of large restorations, can be counteracted by means of slow cooling to below the transformation temperature of the veneering ceramic during the last firing cycle (approx. 600°C for VITA VM 9). Such a firing procedure with expansion cooling is well known as a metal ceramic technique to dental technicians. A step of

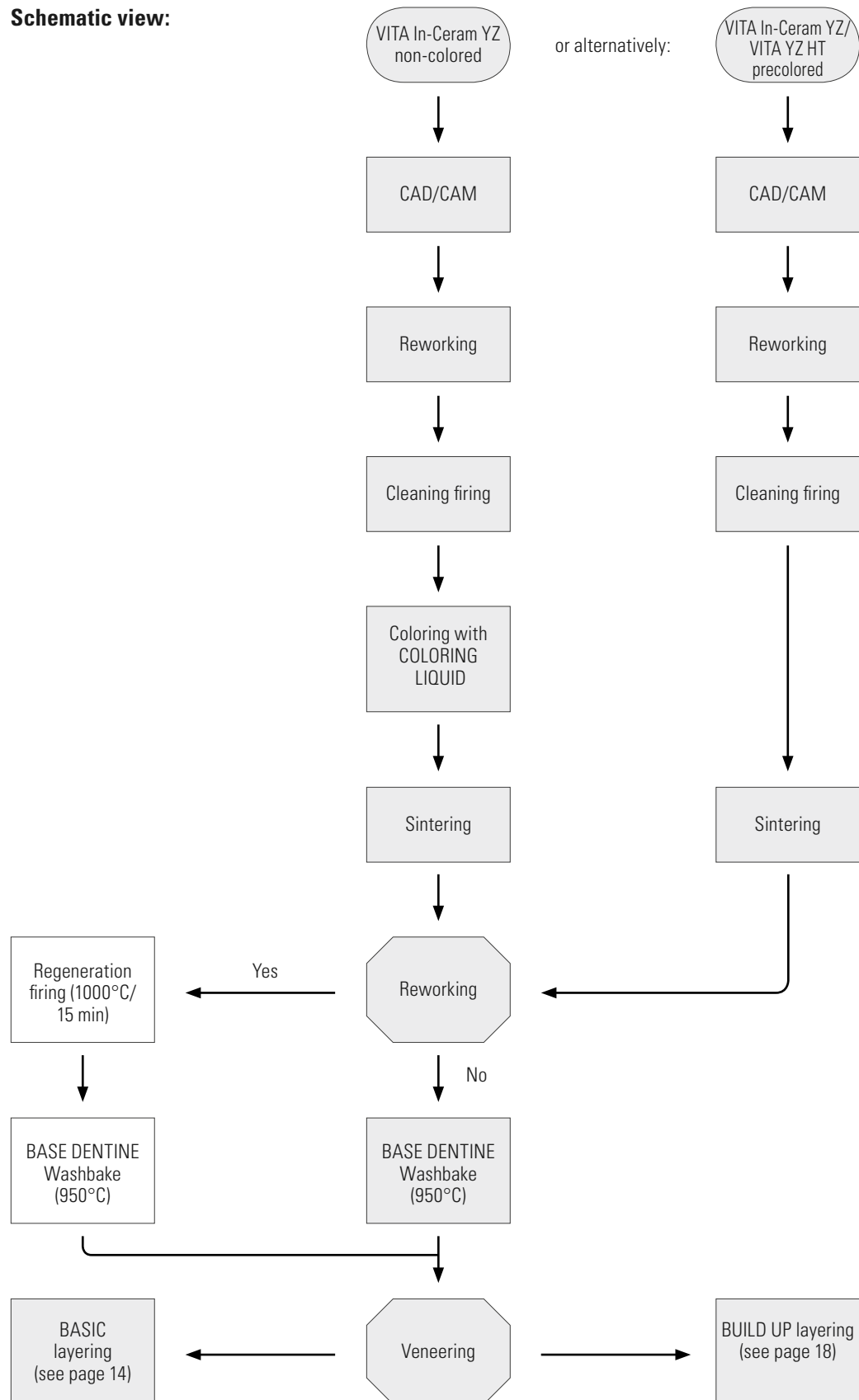
this nature is necessary to reduce stress in the case of some gold alloys. It is also necessary to adhere to the standard and familiar guidelines for all-ceramic dental restorations as follows:

- dentists must carry out the preparation correctly according to the recommended procedure for all-ceramic restorations; for instance, a circumferential chamfer (not a tangential preparation) is required in the case of all-ceramic restorations.
- after grinding in situ by the dentist in order to adjust the occlusion, either polishing must be repeated or glaze firing needs to be carried out.

More information on this subject:





K.H. Kunzelmann, M. Kern, P. Pospiech, A. Mehl, R. Frankenberger, B. Reiss and K. Wiedhahn: Vollkeramik auf einen Blick – 3. Auflage Herausgeber AG Keramik, ISBN-Nr. 3-00-017195-0.

Schematic view:



The restorations should be cleaned in distilled water and grinding dust should be removed prior to the application. Cleaning firing should be performed on a fibrous pad in a ceramic furnace (e.g. VITA VACUMAT) to remove the cooling and lubricating liquid from the porous structure.

Cleaning firing in the VITA VACUMAT®

Predry. °C	 min.	 min.	 °C/min.	approx. temp.°C	 min.	VAC min.
500	3.00	6.00	33	700	5.00	–

According to the shade to be reproduced, the restoration is immersed into the coloring liquid in the working container. The recommended immersion time is 2 minutes. When immersing the substructure, vacuum or pressure (2 bars) can be used additionally.



⚠ Important: Use only plastic tweezers or a plastic sieve.

Then remove excess COLORING LIQUID with a paper tissue and let dry. Do not sinter the object in wet condition.



The substructure can be colored from within and without at the margins in order to ensure complete penetration of the color.

⚠ Attention: The application brush should only be used to apply COLORING LIQUID! The use of a flat brush is recommended.
Do not use for layering the ceramic: risk of discoloration!
The brush may only be cleaned with distilled water.



Restorations colored with COLORING LIQUID should only be sintered using the slotted crucible. Accordingly, perfect firing of the organic components is ensured.

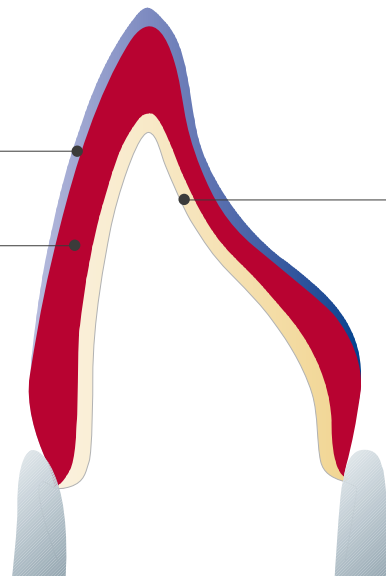


More information on further processing can be found in the Working Instructions for VITA In-Ceram YZ (publication No. 1649).

VITA VM 9 ENAMEL



VITA VM 9 BASE DENTINE



Colored all-ceramic
substructure (CTE approx. 10.5)

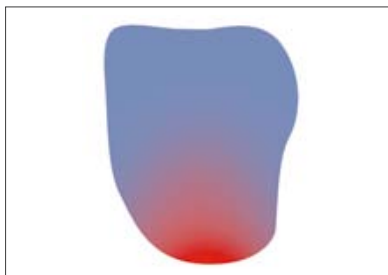
VITA VM 9 BASIC layering consists of the application of the two materials BASE DENTINE and ENAMEL.

The color-bearing BASE DENTINE materials, which provide good coverage, offer the perfect precondition for the preparation of veneers with intensive shades. With this two-layer alternative VITA offers an ideal solution for the reproduction of optimal shade results in case of thin walls. Additionally, the intensive shade effect of the BASE DENTINE materials permits generous use of the ENAMEL materials which create the desired translucency. The user is able to prepare a natural restoration with a lifelike appearance with only two layers.

⚠ Note: The intensity of the restoration can be varied with different layer thicknesses of BASE DENTINE and ENAMEL. The thicker the BASE DENTINE layer, the more intensive is the shade of the restoration. The thicker the ENAMEL layer, the paler is the shade of the restoration.

The use of CHROMA PLUS materials helps to achieve perfect shade reproduction in the cervical area.

To obtain a brighter or warmer shade, the respective TRANSPA DENTINE can either be mixed with SUN DENTINE or replaced by SUN DENTINE. When using CHROMA PLUS or SUN DENTINE materials, the final result of the restoration may differ significantly from the shade sample.





Colored VITA In-Ceram® YZ crown and bridge substructure (CTE approx. 10.5)

Substructure colored with COLORING LIQUID ready for veneering with VITA VM9. To allow easy removal of the restoration later on, the model must be previously insulated using the VITA Modisol pen.



Washbake firing

To achieve adequate bonding of colored VITA In-Ceram YZ / VITA YZ HT substructures and VITA VM9, we recommend carrying out a BASE DENTINE washbake. The BASE DENTINE powder is mixed with MODELLING LIQUID to obtain a thin aqueous mixture and applied very thinly to the dry and clean substructure while ensuring uniform coverage.

To support and intensify the base shade in case of thin walls or non-colored zirconia substructures, CHROMA PLUS materials may be used for the washbake.



Recommended firing

Predry. °C	→ min.	↗ min.	↗ °C/min.	approx. temp.°C	→ min.	VAC min.
500	2.00	8.11	55	950	1.00	8.11



Application of VITAVM®9 BASE DENTINE

Apply the desired shade of BASE DENTINE that has been mixed with MODELLING LIQUID starting from the neck to obtain the required complete tooth shape. The centric, lateral and protrusive occlusion should be checked in the articulator already during this stage.



To obtain adequate space for the enamel, removal of corresponding amount of the BASE DENTINE material according to the layering pattern is required.



Application of VITAVM®9 ENAMEL

Apply several small portions of ENAMEL to complete the crown mould beginning from the middle third of the crown. To compensate firing shrinkage, the size of the mould must be prepared somewhat larger.

The classification table for the ENAMEL materials can be found on page 26.



Prior to the first dentine firing, the individual units of bridges must be separated in the interproximal areas down to the substructure.



Restoration ready for first dentine firing.
Only firing pad for ceramic may be used for firing!

Recommended firing - first dentine firing*

Predry. °C	→ min.	↗ min.	↗ °C/min.	approx. temp. °C	→ min.	VAC min.
500	6.00	7.27	55	910	1.00	7.27

* For further details on the recommended firing procedures in the case of larger restorations please refer to page 23.



Restoration after first dentine firing.



Corrections of shape/further layering

Insulate the model once more with the VITA Modisol pen.
The interdental spaces and the basal surface of the pontic must be filled with BASE DENTINE.



Apply BASE DENTINE starting from the neck and add ENAMEL in the body area up to the incisal area to perform subsequent corrections of the shape.

Recommended firing - second dentine firing*

Predry. °C	→ min.	↗ min.	↗ °C/min.	approx. temp. °C	→ min.	VAC min.
500	2.00	8.11	55	950	1.00	8.11

* For further details on the recommended firing procedures in the case of larger restorations please refer to page 23.



Bridge and crown after second dentine firing.



Finishing

Finish the bridge or crown respectively. For glaze firing, the entire surface must be ground evenly and grinding particles must be removed carefully.

When processing the interdental spaces with the diamond separating disc, please ensure that no damage is caused to the substructure.

In case of formation of dust, use an extraction system or wear a face mask. Additionally, protective goggles must be worn when grinding the fired ceramic.



If required, the entire restoration can be coated with VITA AKZENT Plus GLAZE and then individualization can be carried out using the VITA AKZENT Plus stains. (see VITA AKZENT Plus working instructions, No. 1925)

Recommended firing - glaze firing with VITA AKZENT® Plus*

Predry. °C	→ min.	↗ min.	↗ °C/min.	approx. temp. °C	→ min.	VAC min.
500	4.00	5.00	80	900	1.00	—

* For further details on the recommended firing procedures in the case of larger restorations please refer to page 23.



Completed restoration on the model.

Note: If the restoration needs to be adjusted (ground) when it is tried in, it must be smoothed again.
Polishing or glaze firing have proved to be very suitable.

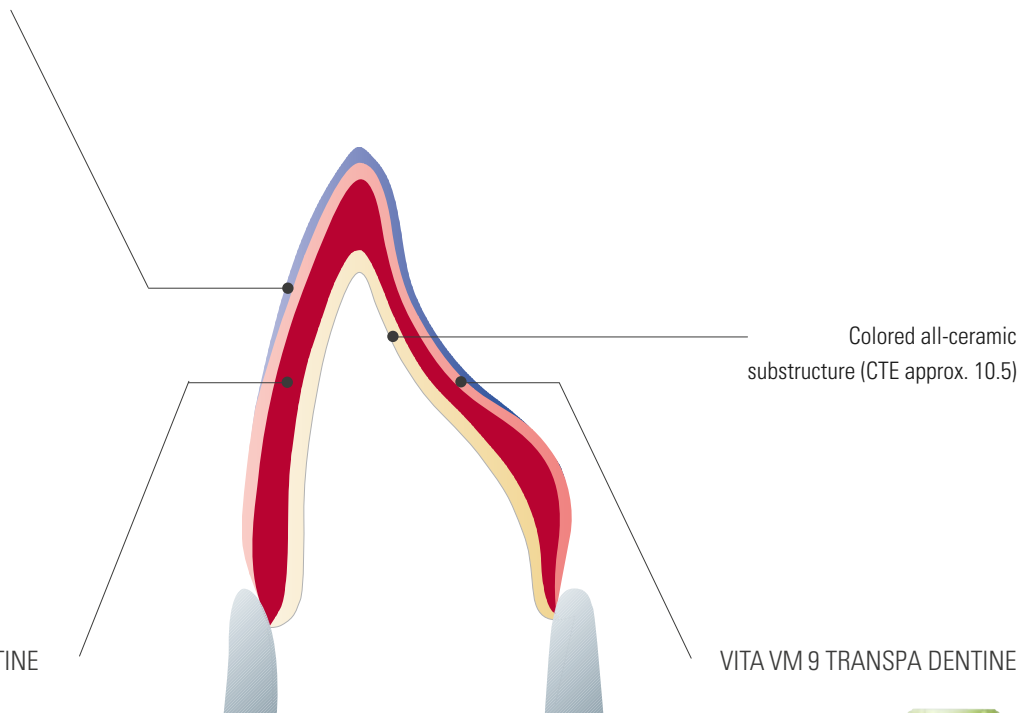
VITA VM 9 ENAMEL



VITA VM 9 BASE DENTINE



VITA VM 9 TRANSPA DENTINE



The VITA VM 9 BUILD UP layering includes the application of the three materials BASE DENTINE, TRANSPA DENTINE and ENAMEL.

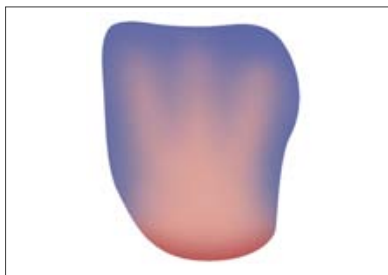
The combination of color-bearing BASE DENTINE and translucent TRANSPA DENTINE in the VITA VM 9 BUILD UP layering creates an enhanced effect of depth in the restoration,

which results in even more convincing reproduction of the natural example. The use of the three-layer method permits reduced and more individual application of the ENAMEL materials.

By combining ENAMEL and TRANSPA DENTINE according to the layer thickness of BASE DENTINE, the intensity of the shade can be individualized. An increased proportion of BASE DENTINE results in an intensified shade whereas larger quantities of TRANSPA DENTINE and ENAMEL will reduce the chroma of the shade.

⚠ Note: The shade effect of the restoration is mainly influenced by BASE DENTINE. Analogously to natural teeth, the TRANSPA DENTINE materials create a harmonious transition to the enamel.

The use of CHROMA PLUS materials helps to achieve perfect shade reproduction in the cervical area.



To obtain a brighter or warmer shade, the respective TRANSPA DENTINE can either be mixed with SUN DENTINE or replaced by SUN DENTINE. When using CHROMA PLUS or SUN DENTINE materials, the final result of the restoration may differ significantly from the shade sample.



Colored VITA In-Ceram® YZ crown and bridge substructure (CTE approx. 10.5)

Substructure colored with COLORING LIQUID ready for veneering with VITA VM 9. To allow easy removal of the restoration later on, the model must be previously insulated using the VITA Modisol pen.



Washbake firing

To achieve adequate bonding of colored VITA In-Ceram YZ/VITA YZ HT substructures and VITA VM 9, we recommend carrying out a BASE DENTINE washbake. The BASE DENTINE powder is mixed with MODELLING LIQUID to obtain a thin aqueous mixture and applied very thinly to the dry and clean substructure while ensuring uniform coverage.

To support and intensify the base shade, CHROMA PLUS materials may be used for the washbake. This is recommended for very thin walls or non-colored zirconia substructures.



Recommended firing

Predry. °C	→ min.	↗ min.	↗ °C/min.	approx. temp.°C	→ min.	VAC min.
500	2.00	8.11	55	950	1.00	8.11



Application of VITAVM®9 BASE DENTINE

Apply the desired shade of BASE DENTINE that has been mixed with MODELLING LIQUID over the whole surface starting from the neck in reduced tooth size. The centric, lateral and protrusive occlusion should be checked in the articulator already during this stage.



Completely layered BASE DENTINE.



Application of VITAVM®9 TRANSPA DENTINE

TRANSPA DENTINE is applied in the required complete tooth shape.



To obtain sufficient space for the enamel, the volume of the TRANSPA DENTINE must be reduced correspondingly.



Application of VITAVM®9 ENAMEL

To complete the crown, apply several small portions of ENAMEL to the upper third of the crown. To compensate firing shrinkage, the size of the mould must be prepared somewhat larger.

The classification table for the VITAVM9 ENAMEL materials can be found on page 26.



Prior to firing, the individual units of bridges must be separated in the interdental areas down to the substructure.



Restoration ready for first dentine firing.
Only firing pad for ceramic may be used for firing!

Recommended firing - first dentine firing*

Predry. °C	→ min.	↗ min.	↗ °C/min.	approx. temp.°C	→ min.	VAC min.
500	6.00	7.27	55	910	1.00	7.27

* For further details on the recommended firing procedures in the case of larger restorations please refer to page 23.



Restoration after first dentine firing.



Corrections of shape/further layering

Insulate the model once more at the pontic with the VITA Modisol pen.

The interdental spaces and the basal surface of the pontic must be filled with BASE DENTINE.



Subsequent corrections of the shape in the body area are carried out using TRANSPA DENTINE ...



... and ENAMEL in the incisal area.

Recommended firing - second dentine firing*

Predry. °C	→ min.	↗ min.	↗ °C/min.	approx. temp.°C	→ min.	VAC min.
500	6.00	7.16	55	900	1.00	7.16

* For further details on the recommended firing procedures in the case of larger restorations please refer to page 23.



Bridge and crown after second dentine firing.



Finishing

Finish the bridge or crown respectively. For glaze firing, the entire surface must be ground evenly and grinding particles must be removed carefully.

When processing the interdental spaces with the diamond separating disc, please ensure that no damage is caused to the substructure.

In case of formation of dust, use an extraction system or wear a face mask. Additionally, protective goggles must be worn when grinding the fired ceramic.



If required, the entire restoration can be coated with VITA AKZENT Plus GLAZE and then individualization can be carried out using the VITA AKZENT Plus stains. (see VITA AKZENT Plus working instructions, No. 1925)



Recommended firing - glaze firing with VITA AKZENT® Plus*

Predry. °C	→ min.	↗ min.	↗ °C/min.	approx. temp. °C	→ min.	VAC min.
500	4.00	5.00	80	900	1.00	—

* For further details on the recommended firing procedures in the case of larger restorations please refer to page 23.









Completed restoration on the model.

⚠ Note: If the occlusion of the restoration needs to be adjusted using abrasive tools when it is tried in, it must be smoothed again. Polishing or glaze firing have proved to be very suitable.

Owing to the poor thermal conductivity of both materials (Y-TZP and veneering ceramic), higher residual stress can occur in this compound system than is known in the case of metal ceramics. This residual thermal stress in the veneering

ceramic can be counteracted by means of slow cooling to below the transformation temperature of the veneering ceramic during the last firing cycle (approx. 600°C for VITAVM9).

	Predry. °C	 min.	 min.	 °C/min.	approx. temp. °C	 min.	 °C	 min.	VAC min.
Cleaning firing	500	3.00	6.00	33	700	5.00	—	—	—
Regeneration firing (optional, see page 11)	500	0.00	5.00	100	1000	15.00	—	—	—
Washbake firing	500	2.00	8.11	55	950	1.00	—	—	8.11
MARGIN* firing	500	6.00	8.21	55	960	1.00	—	—	8.21
EFFECT LINER* firing	500	6.00	7.49	55	930	1.00	—	—	7.49
First dentine firing	500	6.00	7.27	55	910	1.00	600**	—	7.27
Second dentine firing	500	6.00	7.16	55	900	1.00	600**	—	7.16
Glaze firing	500	0.00	5.00	80	900	1.00	600**	—	—
Glaze firing with AKZENT Plus	500	4.00	5.00	80	900	1.00	600**	—	—
Corrective firing with CORRECTIVE*	500	4.00	4.20	80	760	1.00	500**	—	4.20

*Indication range, see pages 27/28

** Long-term cooling down to the respective temperature is recommended for the respective **last** firing cycle of the veneering ceramic.

The lift position for VITA VACUMAT furnaces should be > 75%.

Firing object must be protected against direct supply of air.

When using dental ceramics, the firing result largely depends on the individual firing procedure of the user, i.e. among other aspects, the type of furnace, the location of the temperature sensor, the firing tray as well as the size of the object during the firing cycles.

Our application-technical recommendations for the firing temperatures (regardless of whether they have been provided orally, in writing or in the form of practical instructions) are based on extensive experience and tests. The user, however, should consider this information only as a reference.


Should the surface quality or the degree of transparency or glaze not correspond to the firing result that is achieved under optimum conditions, the firing procedure must be adjusted correspondingly. The crucial factors for the firing procedure are not the firing temperature indicated on the furnace display, but the appearance and the surface quality of the firing object after firing.

Explanation of the firing parameters:

Predr. °C Start temperature

 Predrying time in minutes, closing time

 Heating time in minutes

 Temperature rise rate in degrees Celsius per minute

Temp. approx. °C End temperature

 Holding time for end temperature

 Long-term cooling

VAC min. Vacuum holding time in minutes

VITAVM®9 Classification tables for VITA SYSTEM 3D-MASTER® and VITA classical A1–D4

The classifications given below are only intended to provide reference values!

VITA SYSTEM 3D-MASTER shades	VITA In-Ceram YZ COLORING LIQUID	MARGIN	EFFECT LINER	CHROMA PLUS	ENAMEL
0M1	—	M1	EL1	—	ENL
0M2	—	M1	EL1	—	ENL
0M3	—	M1	EL1/EL2*	—	ENL
1M1	CLL/P	M1/M7*	EL1/EL2*	—	ENL
1M2	CLL/P	M1/M7*	EL2	—	ENL
2L1.5	CLL/P	M1/M7*	EL1/EL2*	CP2	ENL
2L2.5	CLM	M1/M4*	EL1/EL3*	CP2	ENL
2M1	CLL/P	M1/M4*	EL1/EL6*	CP2	ENL
2M2	CLL/P	M1/M4*	EL1/EL3*	CP2	ENL
2M3	CLL/P	M4	EL2/EL4*	CP2	ENL
2R1.5	CLL/P	M1/M7*	EL1/EL6*	CP2	ENL
2R2.5	CLM	M1/M4*	EL2/EL4*	CP2	ENL
3L1.5	CLM	M4/M7*	EL2/EL6*	CP3	ENL
3L2.5	CLM	M4/M7*	EL4/EL6*	CP3	ENL
3M1	CLL/P	M7	EL1/EL6*	CP3	ENL
3M2	CLM	M4/M7*	EL2/EL6*	CP3	ENL
3M3	CLM	M4/M9*	EL4/EL6*	CP3	ENL
3R1.5	CLM	M7	EL2/EL3*	CP3	ENL
3R2.5	CLM	M4/M7*	EL5/EL6*	CP3	ENL
4L1.5	CLM	M7	EL6	CP4	END
4L2.5	CLM	M4/M9*	EL3/EL4*	CP4	END
4M1	CLL/P	M7	EL6	CP4	END
4M2	CLM	M7/M9*	EL2/EL3*	CP4	END
4M3	CLM	M9	EL5/EL6*	CP4	END
4R1.5	CLM	M7/M8*	EL2/EL3*	CP4	END
4R2.5	CLM	M7/M9*	EL3/EL4*	CP4	END
5M1	CLM	M7/M8*	EL3/EL6*	—	END
5M2	CLM	M7/M9*	EL5/EL6*	—	END
5M3	CLM	M5/M9*	EL3/EL4*	—	END

VITA classical A1–D4 shades	VITA In-Ceram YZ COLORING LIQUID	MARGIN	EFFECT LINER	CHROMA PLUS	ENAMEL
A1	CLL/P	M1/M7*	EL2	CP1	ENL
A2	CLM	M4/M7*	EL1/EL3*	CP2	ENL
A3	CLM	M4	EL4/EL6*	CP2/CP3*	ENL
A3.5	CLM	M4/M9*	EL5/EL6*	CP2/CP3*	END
A4	CLM	M4/M9*	EL1/EL4*	CP2/CP4*	END
B1	CLL/P	M1/M4*	EL1/EL2*	CP1	END
B2	CLM	M1/M4*	EL1/EL3*	CP1	END
B3	CLM	M4	EL2/EL4*	CP2/CP3*	END
B4	CLM	M4/M9*	EL4/EL6*	CP3	END
C1	CLL/P	M1/M4*	EL1/EL6*	CP1	END
C2	CLM	M4/M7*	EL2/EL6*	CP1/CP5*	END
C3	CLM	M4/M7*	EL6	CP1/CP5*	ENL
C4	CLM	M4/M7*	EL3/EL6*	CP5	ENL
D2	CLM	M1/M9*	EL2/EL6*	CP1/CP5*	END
D3	CLM	M4/M7*	EL2/EL3*	CP2/CP5*	END
D4	CLM	M1/M4*	EL2/EL6*	CP2/CP5*	END

* Mixing ratio 1:1



VITAVM® MODELLING LIQUID



For mixing BASE DENTINE, TRANSPA DENTINE, ENAMEL and all additional materials.







































VITA MODELLING FLUID

For mixing all dentine, incisal and additional materials.

The MODELLING FLUID avoids rapid drying of the ceramic material. Moreover increased plasticity during layering is achieved.

VITAVM®9 EFFECT ENAMEL – can be used for all enamel areas of the natural tooth – universally suitable translucent enamel effect material – to achieve a natural effect of depth		EE1	mint cream	whitish-translucent	
		EE2	pastel	pastel	
		EE3	misty rose	pink-translucent	
		EE4	vanilla	yellowish	
		EE5	sun light	yellowish-translucent	
		EE6	navajo	reddish-translucent	
		EE7	golden glow	orange-translucent	
		EE8	coral	red-translucent	
		EE9	water drop	bluish translucent	
		EE10	silver lake blue	blue	
		EE11	drizzle	greyish-translucent	
VITAVM®9 EFFECT PEARL – only suitable for effects on the surface, not for layering in – perfectly suitable for bleached restorations – to obtain nuances of yellow and red		EP1	pearl	shade in pastel-yellow	
		EP2	pearl blush	shade in pastel-orange	
		EP3	pearl rose	shade in pastel-rosé	
VITAVM®9 EFFECT OPAL – to create the opal effect in restorations of young and translucent teeth		E01	opal	neutral, universally suitable	
		E02	opal whitish	whitish	
		E03	opal bluish	bluish	
		E04	opal blue	blue	
		E05	opal dark violet	dark violet	
VITAVM®9 EFFECT LINER – 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 – can also be used for the washbake; the firing temperature, however, must be 970°C		EL1	snow	white	
		EL2	cream	beige	
		EL3	tabac	brown	
		EL4	golden fleece	yellow	
		EL5	papaya	orange	
		EL6	sesame	green-yellow	
VITAVM®9 MARGIN – for minor corrections at the margin area – after the application, the plastified MARGIN material must be hardened through the supply of heat; it is recommended to use a hair-drier or radiated heat from the furnace to stabilize the shoulder		M1	beige	white	
		M4	wheat	yellow	
		M5	amber	amber	
		M7	seashell	light beige	
		M8	tan	pastel-brown	
		M9	beach	light orange	

VITAVM®9 SUN DENTINE – to obtain a brighter or warmer shade, the respective TRANSPA DENTINE can either be mixed with SUN DENTINE or replaced by SUN DENTINE		SD1	sun light	light yellow	
		SD2	sun rise	light orange	
		SD3	sun set	orange-red	
VITAVM®9 CHROMA PLUS – 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		CP1	ivory	ivory	
		CP2	almond	beige	
		CP3	moccasin	light orange-brown	
		CP4	caramel	orange	
		CP5	burlywood	green-brown	
VITAVM®9 EFFECT CHROMA – color-intensive modifier porcelains – to accentuate certain color areas of the tooth – to vary the lightness value in the neck, dentine and enamel areas		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	
VITAVM®9 MAMELON – highly fluorescent porcelain which is mainly used in the incisal area – for shade characterization between incisal edge and dentine		MM1	ecru	beige	
		MM2	mellow buff	warm yellow-brown	
		MM3	peach puff	tender orange	
VITAVM®9 GINGIVA – 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		G1	rose	dusky pink	
		G2	nectarine	orange-pink	
		G3	pink grapefruit	pink	
		G4	rosewood	brown-red	
		G5	cherry brown	dark red	
VITAVM®9 CORRECTIVE – with reduced firing temperature (760°C) for corrections after glaze firing – in three nuances for neck, dentine and enamel areas		COR1	neutral	neutral	
		COR2	sand	beige	
		COR3	ochre	brown	

The material

VITA PM 9 (Pressable Material) was developed from the proven fine-structure feldspar ceramic VITAVM9 and is used for overpressing partially yttrium stabilized ZrO_2 substructures in the CTE range of approx. $10.5 \cdot 10^{-6} \cdot K^{-1}$, such as VITA In-Ceram YZ and for the fabrication of single- or multi-surface inlays, onlays, partial crowns, veneers and anterior crowns using the substructure-free staining or layering technique.

Due to their noticeably lower strength, restorations without zirconia support may only be cut back minimally to exclusively individualize them with VITAVM9 ADD-ON materials later on. These substructure-free restorations require adhesive cementation.

The VITAPM9 press pellets exhibit natural fluorescence. As a result, they fulfill the patients' wishes for individual esthetic restorations with a favorable priced range of press pellets in different colors.

Advantages

- All-in one press ceramic
 - Substructure-free pressing technique
 - Technique of overpressing zirconia
 - Staining technique
 - Layering technique or a combination of both
- Excellent bonding to yttrium-stabilized ZrO_2 substructures
- The fine-structure composition of VITAPM9 provides
 - high material homogeneity
 - excellent milling and polishing capacity in the laboratory and in situ
 - homogeneous and sealed surfaces
 - superior esthetic results
- High-quality press ceramic investment material for precise press results
- Time-saving since reaction layer of the investment material on the pressed and overpressed restorations is avoided

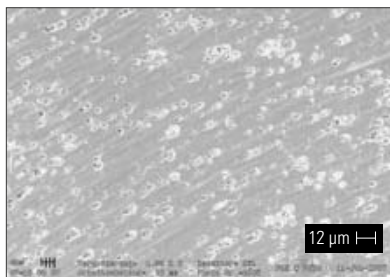


Fig. 1: SEM picture of the etched structure of a VITA PM 9 restoration with a very uniform structure of the leucite crystals (etched with 5 % HF for 120 sec., magnification x 1000)

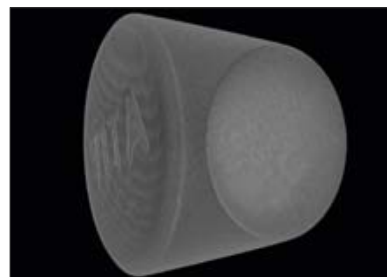












Fig. 2: Computer tomographic image (perspective) of a VITA PM 9 press pellet. The structure of the ceramic does not reveal any defect.

VITAPM®9 – technical data*	
Property	Value
CTE (25–500°C)	$9.0\text{--}9.5 \cdot 10^{-6} \cdot \text{K}^{-1}$
Flexural strength	approx. 100 MPa
Solubility in acid	< 20 µg/cm ²

* The technical-physical values are typical measuring results and refer to internal samples and measurement equipment available on site. If samples are prepared using different methods and measurement equipment, other measuring results may be produced.

	VITAPM®9	
	Overpressing technique	Substructure-free staining and layering technique
	—	●
	○	●
	—	●
	○	●
	●	●
	●	—
	●	●
	●	—
Staining technique	VITA AKZENT Plus	VITA AKZENT Plus
Layering technique	 with all VITAVM9 materials	 only with VITA VM 9 ADD-ON materials

- recommended
- possible

Indication:

- **Overpressing technique**
overpressing of colored and non-colored partially yttrium-stabilized ZrO₂ crown and bridge substructures in the CTE range of approx. $10.5 \cdot 10^{-6} \cdot \text{K}^{-1}$, such as substructures made of VITA In-Ceram YZ.*
- **Substructure-free staining and layering technique**

Individualizing

- Overpressing technique:
With all VITA VM 9 materials.
- Substructure-free staining and layering technique:
With VITA VM 9 ADD-ON materials.
Subsequent glazing with VITA AKZENT Plus GLAZE LT.

Staining technique

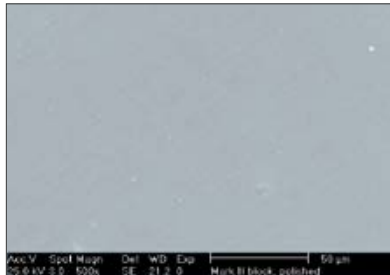
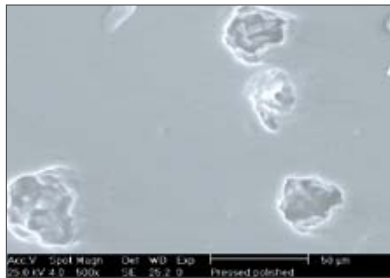
Characterization with the stains of the VITA AKZENT Plus assortment

Contraindication

- bridges without zirconia substructure
- overpressing of zirconia substructures beyond the CTE range given
- for patients with parafunctions (e.g. bruxism)
- in cases of inadequate oral hygiene
- if minimum layer thicknesses of the ceramic can not be adhered to

For detailed information on processing VITA PM 9 please refer to the Working Instructions No. 1450.

* If the information in the working instructions and the guidelines on substructure fabrication/design provided by VITA are adhered to, VITA PM 9 can be used for substructures made from 3Y-TZP (-A) regardless of the respective manufacturer. Since the function depends on a variety of different parameters, the quality of the individual restoration can only be ensured by the user.



Clinically proven a million times over

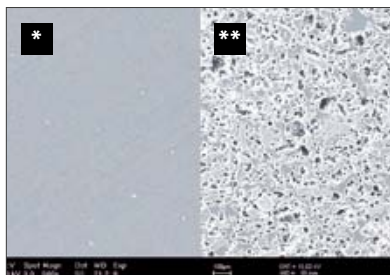
The advantages of the material and processing properties of the VITABLOCS proven by scientific studies have been confirmed by over 16 million clinically successful restorations made of this material to date. The VITABLOCS were rated to be the best material in the CRA newsletter (06/2006). The clinical success rate of inlays and full crowns made of VITABLOCS after 7 years was 94%. In contrast, only 71% of the restorations manufactured from a competitor's glass ceramic were free from defects. Moreover it was demonstrated that clinical abrasion of the restorations made of VITABLOCS corresponded to that of natural tooth enamel.

VITABLOCS: The chameleon among the ceramics

The high translucency of VITABLOCS guarantees excellent shade matching with the patient's residual tooth substance (known as the "chameleon effect"). The shade of the restorations can be individualized and esthetically perfected with the porcelains of the VITA VM 9 ESTHETICS KIT or VITA AKZENT Plus.

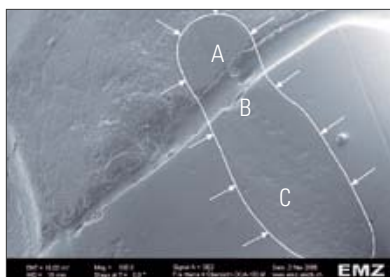
Fig. 1: Press ceramic (magnification 500 x)
Fig. Russell A. Giordano, DMD, DMSc, Boston University.

Fig. 2: Excellent homogeneity of the structures of industrially sintered VITABLOCS
Fig. Russell A. Giordano, DMD, DMSc, Boston University.



High quality and antagonist friendly

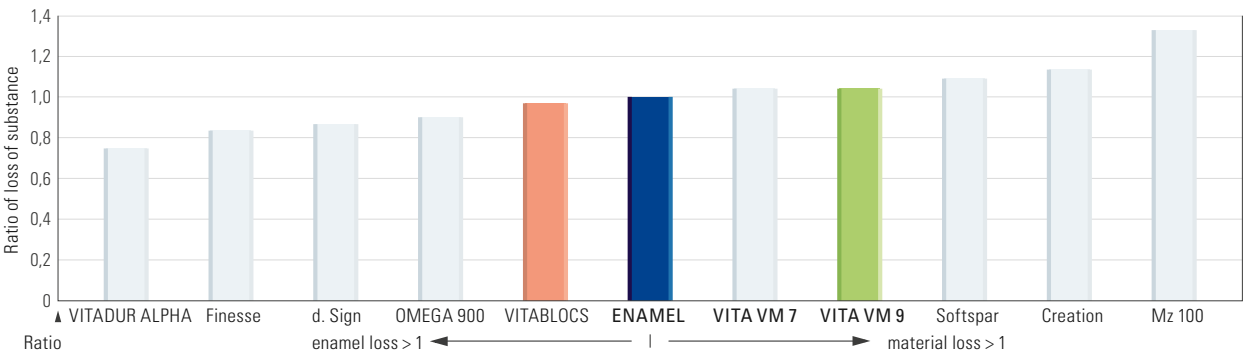
The unique fine structure of the VITABLOCS ceramic and the industrial sintering process at over 1150 °C provide perfect conditions for distinct advantages such as the good polishing properties and superior abrasion resistance of restorations. Restorations made of VITABLOCS abrade the enamel antagonist at approximately the same rate as does natural tooth enamel. As a result, harmful "sandpaper effects" are avoided.



The left figure shows an inlay made of VITABLOCS (A) with an adhesive margin (B) and tooth enamel (C) after 10 years of function in the patient's mouth. The abraded facet (arrows) shows identical abrasion behavior on tooth enamel and VITABLOCS. The smooth surface in the area of the abraded facet indicates the chemical durability of the material. The inlay surface (A) outside the abraded facet shows the different surface polishing and traces of processing by contouring diamonds. The adhesive cementation groove (B) is essentially well preserved.

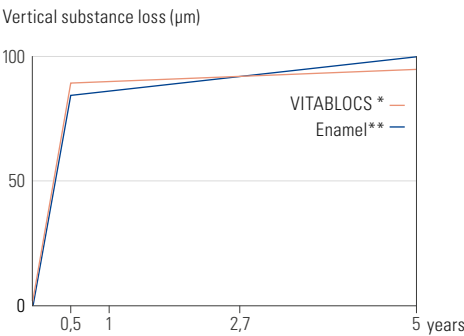
Fig. 3: SEM picture of the VITABLOCS surface (magnification 1000 x), to the left: polished, to the right: etched for 60 seconds.
The uniform and highly retentive etching pattern caused by homogeneous distribution of the crystal and glass phase can be recognized.
* Prof. Dr. Russel A. Giordano II, Boston University
** VITA Zahnfabrik

Fig. 4: Enamel-like abrasion properties of the VITABLOCS.
Clinical case of Prof. Dr. W. H. Mörmann, University of Zurich



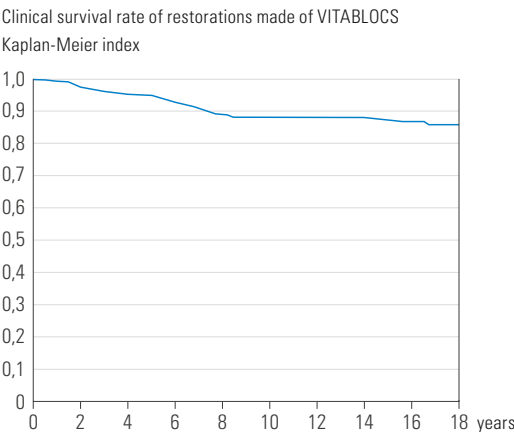
Abrasion properties of various ceramic materials

The abrasion behavior of the VITABLOCS ceramic is very similar to that of natural tooth enamel. The left half of the diagram shows the increasing enamel loss caused by abrasion.



The right half shows the increasing substance loss of the test material.

Prof. Dr. Russel A. Giordano II, Boston University
Prof. Dr. Edward A. McLaren, UCLA



Wear on opposing enamel teeth in vitro.

Source:
* according to Krejci, I.: Wear of CEREC and other restorative materials. Mörmann, W. H. (publ.): International Symposium on Computer Restorations, Quintessence Publishing Co. Chicago, 245-251, 1991
** according to Krejci et al.: Verschleiß von Schmelz, Amalgam und ihrer Schmelzantagonisten im computergesteuerten Kausimulator. Schweiz Monatsschr, Zahnmed 100: 1285, 1990

Probability of success according to Kaplan-Meier procedure, all restorations, n = 1011

Source:
Klinische Überlebensrate von Restaurationen aus VITABLOCS, Dr. B. Reiss, Malsch in: International Journal of Computerized Dentistry 2006; 9:11-22

Indication of VITABLOCS						
						Individualization

recommended


VITAVM®9 BASIC KIT*/**
 BASIC assortment for BASIC layering

Quantity	Content	Material
3	12 g	CHROMA PLUS CP2– CP4
26	12 g	BASE DENTINE 1M1–5M3**
3	12 g	SUN DENTINE SD1–SD3
2	12 g	ENAMEL ENL, END***
1	12 g	NEUTRAL NT***
1	12 g	WINDOW WIN***
3	12 g	CORRECTIVE COR1–COR3
1	50 ml	VITA VM MODELLING LIQUID
–	–	Accessories
1	–	Shade indicator
1	–	VITA Toothguide 3D-MASTER
1	–	Working Instructions

* also available as BASIC KIT SMALL with reduced range of materials

** also available as BASIC KIT classical (A1–D4) and as BASIC KIT SMALL classical in the following six shades: A1, A2, A3, A3.5, B3, D3

*** also available in 50 g


VITAVM®9 BUILD UP KIT*/**
 Add-on assortment for BUILD UP layering

Quantity	Content	Material
26	12 g	TRANSPA DENTINE 1M1– 5M3
1	50 ml	VITA VM MODELLING LIQUID

* also available as BUILD UP KIT SMALL with reduced range of materials

** also available as BUILD UP KIT classical (A1–D4) and as BUILD UP KIT SMALL classical with 6 shades

*** also available in 50 g


VITAVM®9 CLASSICAL COLOR KIT*
 Add-on assortment for VITA VM 9 3D-MASTER users

Quantity	Content	Material
16	12 g	BASE DENTINE A1–D4
16	12 g	TRANSPA DENTINE A1–D4
2	12 g	CHROMA PLUS CP1, CP5
1	50 ml	VITA VM MODELLING LIQUID
1	–	Shade indicator
1	–	VITA classical A1–D4 shade guide
1	–	Working Instructions

* Assortment for VITA VM 9 3D-MASTER customers who wish to add VITA classical A1–D4 shades to their assortment


VITAVM®9 BLEACHED COLOR KIT

Ultra-bright shades for the reproduction of bleached teeth

Quantity	Content	Material
3	12 g	BASE DENTINE 0M1–0M3
3	12 g	TRANSPA DENTINE 0M1– 0M3
1	12 g	ENAMEL ENL
1	12 g	NEUTRAL NT
1	12 g	WINDOW WIN
1	50 ml	VITA VM MODELLING LIQUID
1	–	BLEACHED SHADE GUIDE SHADE GROUP 0M
1	–	Working Instructions


VITAVM®9 PROFESSIONAL KIT*

For incorporating natural effects and characteristics

Quantity	Content	Material
11	12 g	EFFECT CHROMA EC1–EC11
11	12 g	EFFECT ENAMEL EE1–EE11
6	12 g	EFFECT LINER EL1–EL6
3	12 g	MAMELON MM1–MM3
3	12 g	EFFECT PEARL EP1–EP3
5	12 g	EFFECT OPAL EO1–EO5
4	–	Shade guides

* Also available as PROFESSIONAL KIT SMALL (EC1, EC4, EC6, EC8, EC9, MM2, EP1, EO2, EE1, EE3, EE7, EE8, EE9, EE10, EE11)


VITAVM®9 GINGIVA KIT

Gingiva materials with natural effects

Quantity	Content	Material
5	12 g	GINGIVA G1–G5
1	–	GINGIVA shade guide


VITAVM®9 MARGIN KIT

For minor corrections in the area of margins

Quantity	Content	Material
6	12 g	MARGIN M1, M4, M5, M7, M8, M9
1	–	MARGIN shade guide


VITAVM®9 ADD-ON KIT


For individualizing substructure-free, pressed VITA PM 9 restorations

Quantity	Content	Material
8	12 g	ADD-ON ADD1–ADD8
1	5 g	VITA AKZENT Plus GLAZE LT
1	50 ml	VITA VM MODELLING LIQUID
1	20 ml	VITA AKZENT Plus POWDER Fluid
–	–	Accessories
1	–	ADD-ON shade guide
1	–	VITA PM 9 working instructions


VITAVM®9 ESTHETIC KIT for VITABLOCS

Additional assortment for individualizing VITABLOCS

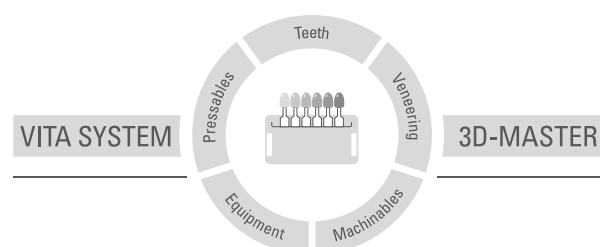
Quantity	Content	Material
1	Set	VITABLOCS 3D-MASTER (10 pieces of Mark II 112)
1	12 g	WINDOW WIN
1	12 g	NEUTRAL NT
2	12 g	ENAMEL ENL, END
1	12 g	EFFECT PEARL EP1
2	12 g	EFFECT ENAMEL EE1, EE10
1	12 g	CORRECTIVE COR1
1	4 g	AKZENT Plus FINISHING AGENT PASTE
1	4 g	AKZENT Plus GLAZE PASTE
1	12 g	EFFECT OPAL EO2
2	12 g	EFFECT CHROMA EC1, EC4
1	12 g	MAMELON MM2
–	–	Accessories
1	–	Working Instructions

Safety at work and health protection	<p>When working with the product, wear suitable safety goggles/ face protection, gloves and safety clothing.</p>	
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IMPORTANT INFORMATION:	<p>Information on troubleshooting can be found under FAQs - all-ceramics - on our website.</p>
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VITA VM9 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 ensured.

With the unique VITA SYSTEM 3D-MASTER all natural tooth shades are systematically determined and completely 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: 08.13

After the publication of these working instructions 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 mark **CE** 0124:

VITA VM⁹ · VITA PM⁹ · VITA BLOCS[®] · VITA In-Ceram[®] YZ · VITA YZ HT · VITA AKZENT[®] Plus

VITA

VITA Zahnfabrik H. Rauter GmbH & Co.KG
Postfach 1338 · D-79704 Bad Säckingen · Germany
Tel. +49 (0) 7761 / 562-0 · Fax +49 (0) 7761 / 562-299
Hotline: Tel. +49 (0) 7761 / 562-222 · Fax +49 (0) 7761 / 562-446
www.vita-zahnfabrik.com · info@vita-zahnfabrik.com
 facebook.com/vita.zahnfabrik