

VITAVM[®]9

Working Instructions



VITA shade determination

VITA shade communication

VITA shade reproduction

VITA shade control

Date of issue: 12.18

VITA – perfect match.

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 90 years

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



VITA shade determination

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 uniquely formed for each individual. After determining the base shade, the details of a tooth - such as translucent zones or anomalies - 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 accurate 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 certain 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 is no longer left to the subjective opinion of an individual. With 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 feldspar ceramic has been designed as a special veneering ceramic featuring a fine structure for partially yttrium-stabilized ZrO₂ substructures with a CTE of approx. $10.5 \cdot 10^{-6} \cdot K^{-1}$, such as VITA 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. In addition, 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 a particularly homogeneous distribution of the crystal and glass phase. This type of structure is described as a "fine structure."

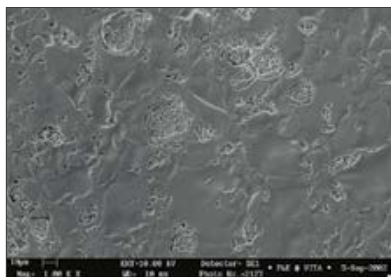


Fig. 1: SEM image of the surface of a ceramic with conventional structure (magnification 1000 x).

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 for 20 seconds with VITA CERAMICS ETCH) reveals a 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. This results in smooth and densely compact surfaces. Accumulation of plaque on the ceramic surface is reduced considerably, supporting easy care and cleaning of the high-quality restoration.

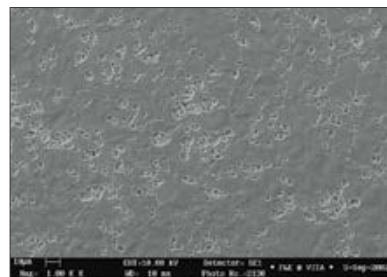
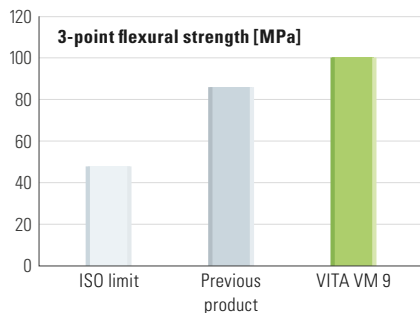


Fig. 2: SEM image of the etched surface of VITA VM 9 (magnification 1000 x).

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) | $10^{-6} \cdot K^{-1}$ | 9.0–9.2 |
| Softening point | °C | approx. 670 |
| Transformation temperature | °C | approx. 600 |
| Solubility in acid | $\mu g/cm^2$ | approx. 10 |
| Average particle size | $\mu m (d_{50})$ | 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 abrasion behavior similar to 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 zirconia. Since the function depends on a variety of parameters, only the user can ensure the quality in the individual case.

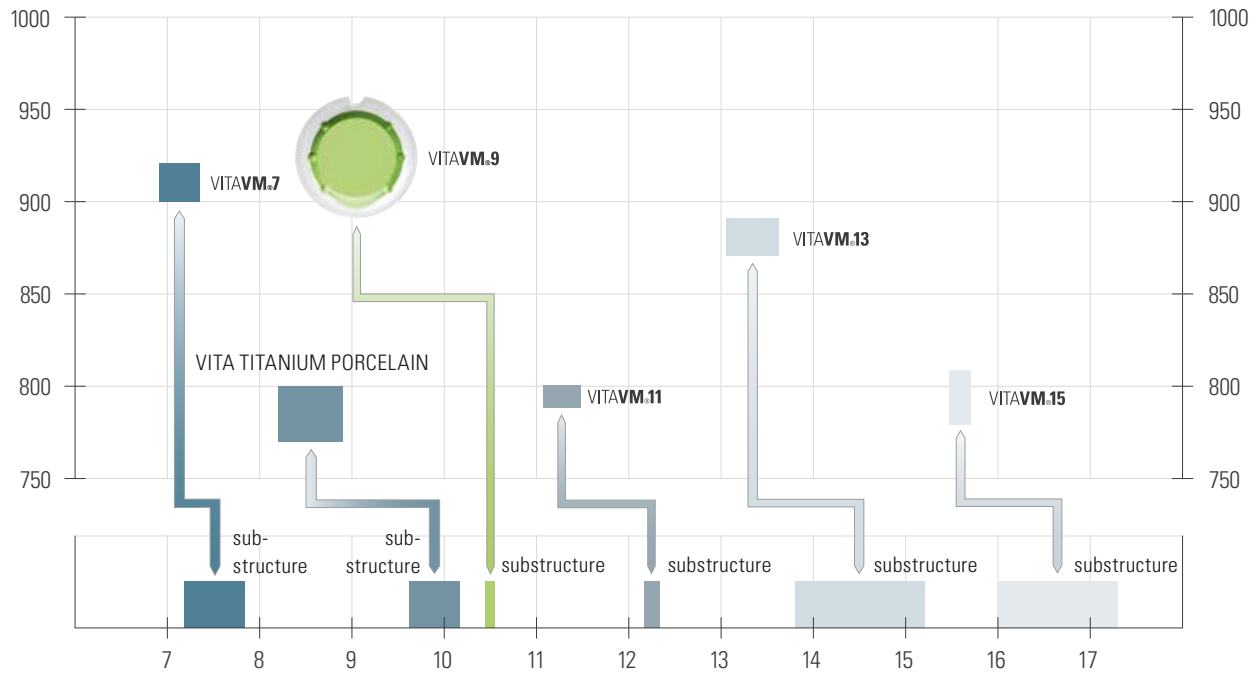
VITAVM®9 Indication range

- for veneering zirconia substructure materials in the CTE range of approx. 10.5, such as VITA YZ SOLUTIONS
- 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

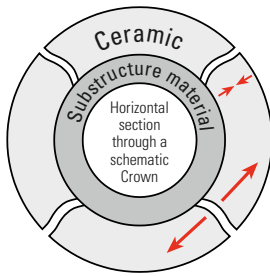
Firing temperature
of ceramic [°C]



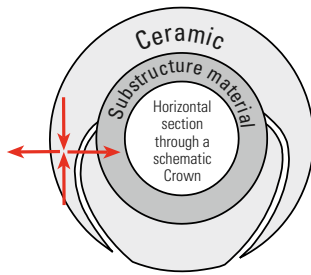
Linear coefficient of thermal expansion of the ceramic, measured at 25–500°C
(alloys - measured at 25–600°C)

| | |
|---|--|
| VITA VM 7 CTE (25–500°C) $6.9\text{--}7.3 \cdot 10^{-6} \cdot \text{K}^{-1}$ | special feldspar veneering ceramic with fine structure for all-ceramic substructure materials in the CTE range of 7.2–7.8 (made of Al ₂ O ₃) |
| VITA TITANKERAMIK CTE (25–500°C) $8.2\text{--}8.9 \cdot 10^{-6} \cdot \text{K}^{-1}$ | substructures made of titanium or titanium alloys Titanium (grade 1) 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 YZ, CTE (25–500°C), approx. $10.0\text{--}10.5 \cdot 10^{-6} \cdot \text{K}^{-1}$ 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 (25–500°C), approx. $11.9\text{--}12.3 \cdot 10^{-6} \cdot \text{K}^{-1}$ |
| 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 CTE (25–600°C) $16.0\text{--}17.3 \cdot 10^{-6} \cdot \text{K}^{-1}$ * |

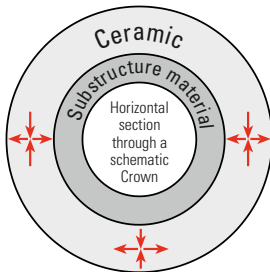
* visit the download section of our website for more information about alloys



If the CTE of the substructure material is considerably lower than the CTE of the veneering ceramic, tangential tensile stress will increase and form radial cracks that run to the outside. This may result in late cracks.



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. In addition, differences in strain (radial tensile stress) develop within the veneer, which can grow with 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 important for the firing result.

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 accordingly.

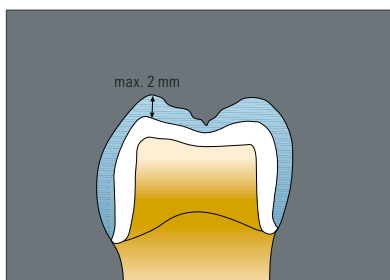
⚠ Note: Firing trays may also have significant influence on the result.

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 by up to 40° - from the reference value given, depending on the furnace that is used, and must 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. However, if the ceramic appears to be milky and non-homogeneous, the firing temperature is too low. Approach the correct firing temperature in steps of 5–10°C.



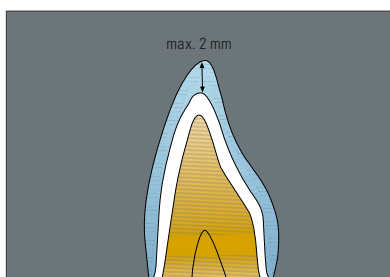
Veneering premolars and molars

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 YZ SOLUTIONS (No. 10446).

Layer thicknesses for ceramics



Veneering anterior teeth

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 optimal layer thickness ranges from 0.7 to 1.2 mm).

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 ZrO₂. As a consequence, complex stress can be formed at the interface of the veneer, which may result in immediate failure or in critical crack growth and consequential late damage to the restoration. This effect can be detected, for example, by radiographic phase analysis (fig.1). Compared with tetragonal ZrO₂, monoclinic ZrO₂ 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 AL₂O₃ (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

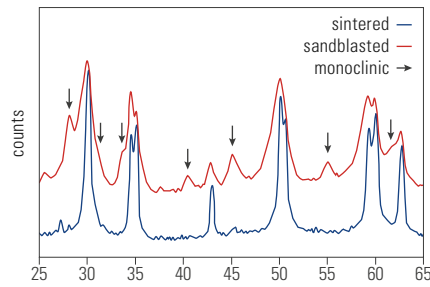


Fig. 1: X-ray diffraction diagram of a Y-TZP (blue) and its phase transition after sandblasting (red).

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 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:

Based on the too poor thermal conductivity of both materials (Y-TZP and veneering ceramic), higher residual stress can occur in this compound system than is known to typically occur in 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

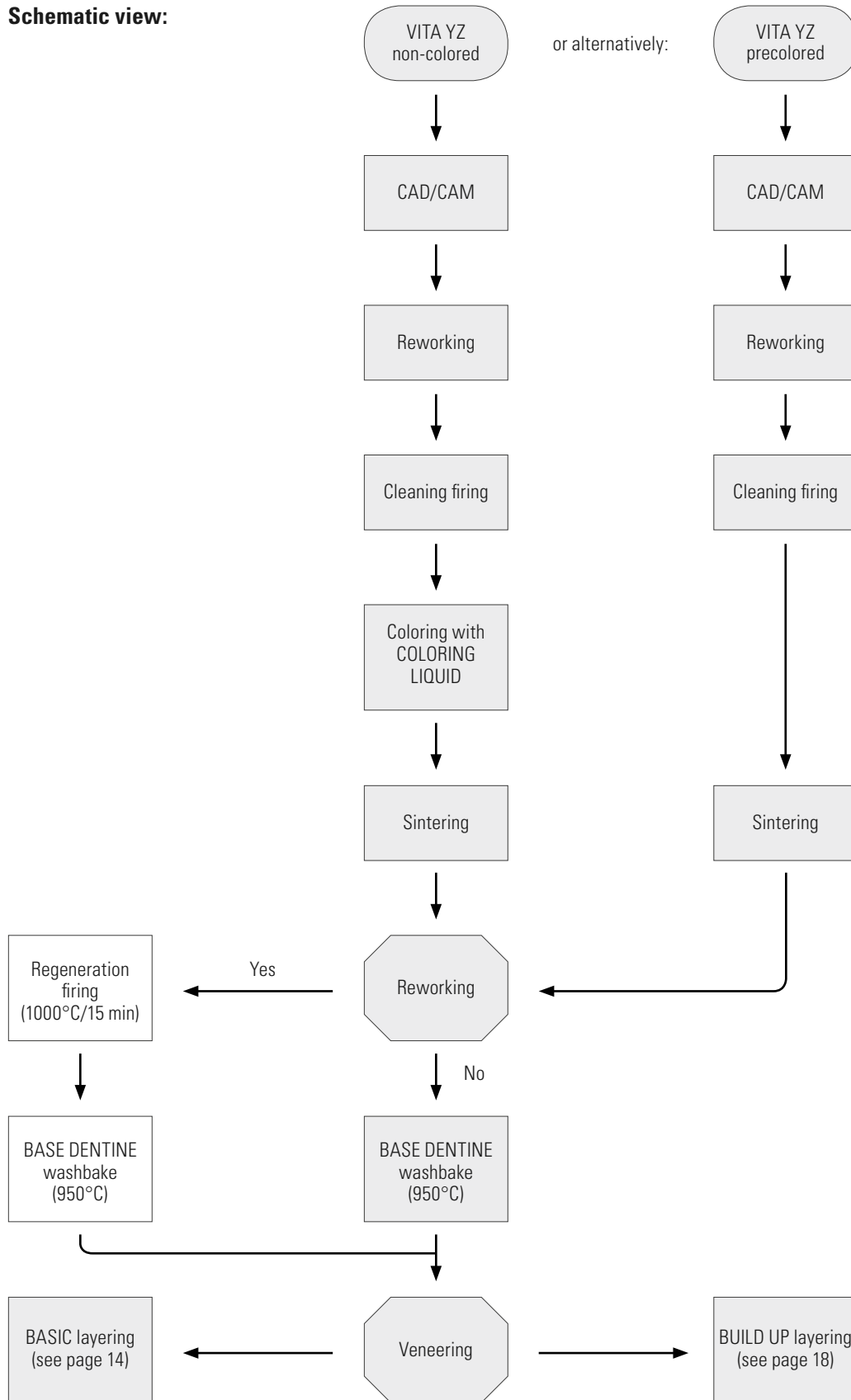
technicians. In the case of some gold alloys, this type of step is necessary to reduce stress. It is also necessary to adhere to the standard and familiar guidelines for all-ceramic dental restorations as follows:

- 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. | Temp. approx. °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 allow to dry. Do not sinter when wet.



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. As a result, perfect firing of the organic components is ensured.

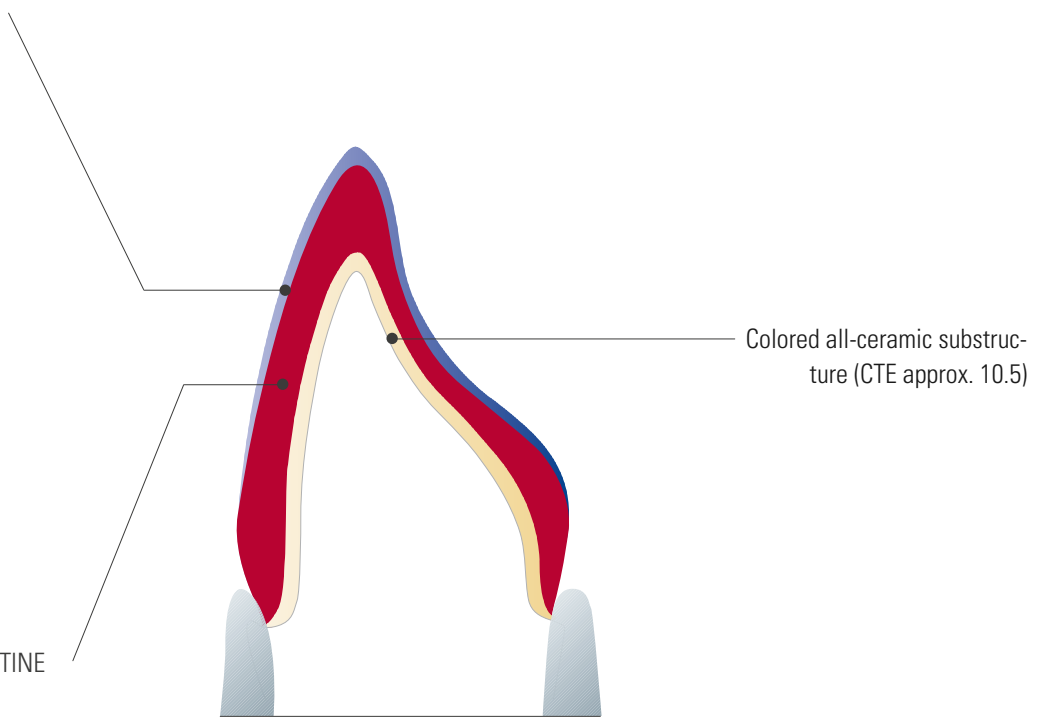


More information on further processing can be found in the Working Instructions for VITA YZ (No. 10446).

VITA VM 9 ENAMEL



VITA VM 9 BASE DENTINE



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

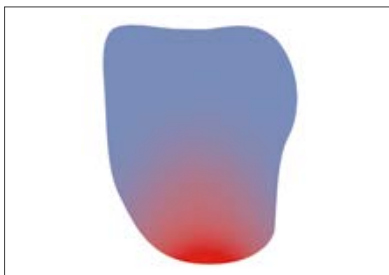
The color-bearing BASE DENTINE materials, which provide good coverage, offer the perfect precondition for the preparation of veneers with intensive shades. With this two-layer alternative, VITA offers an ideal solution for the reproduction of optimal shade results in case of thin walls. Additionally, 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 the shade of the restoration. The thicker the ENAMEL layer, the paler 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 YZ® crown and bridge substructure (CTE approx. 10.0–10.5)

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

To achieve adequate bonding of colored VITA YZ substructures and VITA VM 9, we recommend carrying out a BASE DENTINE washbake. The BASE DENTINE powder is mixed with MODELLING Fluid RS 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. | Temp. approx. °C | → min. | VAC min. |
|------------|--------|--------|-----------|------------------|--------|----------|
| 500 | 2.00 | 8.11 | 55 | 950 | 1.00 | 8.11 |



VITA MODELLING FLUID RS

For mixing any dentin, incisal or additional materials. Its smooth consistency allows extended and wet processing while also ensuring good stability. This fluid is perfectly suited for use in larger restorations and multi-unit bridges.



Application of VITAVM®9 BASE DENTINE

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



To obtain adequate space for the enamel, it is necessary to reduce the BASE DENTINE material, according to the required layering pattern.



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 for the firing shrinkage, the size of the mould should 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 the firing pad for ceramic may be used for the firing!

Recommended firing - first dentine firing*

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

* For further details on the recommended firing procedures for larger restorations, please refer to page 21.



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. | Temp. approx. °C | → min. | VAC min. |
|------------|--------|--------|-----------|------------------|--------|----------|
| 500 | 6.00 | 7.16 | 55 | 900 | 1.00 | 7.16 |

* For further details on the recommended firing procedures for larger restorations, please refer to page 21.



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. | Temp. approx. °C | → min. | VAC min. |
|------------|--------|--------|-----------|------------------|--------|----------|
| 500 | 4.00 | 5.00 | 80 | 900 | 1.00 | – |

* For further details on the recommended firing procedures for larger restorations, please refer to page 21.



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 proven to be very suitable.

VITA VM 9 ENAMEL

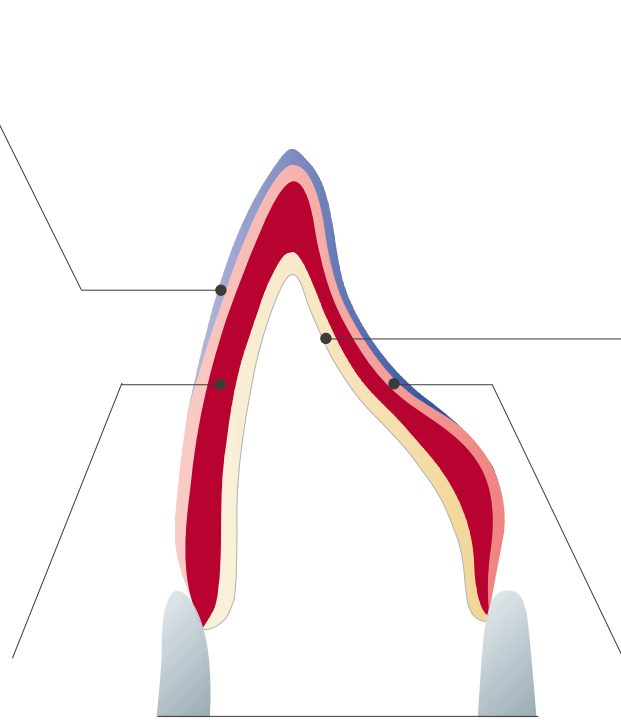


VITA VM 9 BASE DENTINE



Colored all-ceramic substructure (CTE approx. 10.5)

VITA VM 9 TRANSPA DENTINE



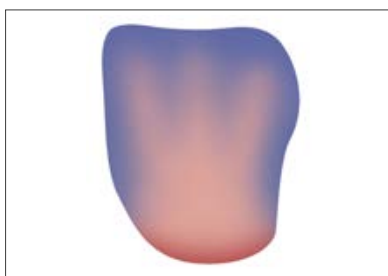
The VITA VM 9 BUILD UP layering includes the application of the three materials BASE DENTINE, TRANSPA DENTINE and ENAMEL.

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 an 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. Analogous 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 YZ® crown and bridge substructure (CTE approx. 10.0–10.5)

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 YZ substructures and VITA VM 9, we recommend carrying out a BASE DENTINE washbake. The BASE DENTINE powder is mixed with MODELLING FLUID RS 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. | Temp. approx. °C | → min. | VAC min. |
|------------|--------|--------|-----------|------------------|--------|----------|
| 500 | 2.00 | 8.11 | 55 | 950 | 1.00 | 8.11 |



VITA MODELLING FLUID RS

For mixing any dentin, incisal or additional materials. Its smooth consistency allows extended and wet processing, while also ensuring good stability. This fluid is perfectly suited for use in larger restorations and multi-unit bridges.



Application of VITAVM®9 BASE DENTINE

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



Completely layered BASE DENTINE.



Application of VITAVM®9 TRANSPA DENTINE

TRANSPA DENTINE is applied in the required complete tooth shape.



To create enough space for the enamel, it is necessary to reduce the volume of TRANSPA DENTINE.



Application of VITAVM®9 ENAMEL

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

The classification table for the VITA VM 9 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 the firing pad for ceramic may be used for the firing!

Recommended firing - first dentine firing*

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

* For further details on the recommended firing procedures for larger restorations, please refer to page 21.



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. | Temp. approx. °C | → min. | VAC min. |
|------------|--------|--------|-----------|------------------|--------|----------|
| 500 | 6.00 | 7.16 | 55 | 900 | 1.00 | 7.16 |

* For further details on the recommended firing procedures for larger restorations, please refer to page 21.



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. | Temp. approx. °C | → min. | VAC min. |
|---------------|-----------|-----------|--------------|---------------------|-----------|-------------|
| 500 | 4.00 | 5.00 | 80 | 900 | 1.00 | – |







* For further details on the recommended firing procedures for larger restorations, please refer to page 21.

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 proven to be very suitable.

Based on the poor thermal conductivity of both materials (Y-TZP and veneering ceramic), higher residual stress can occur in this compound system than is known to typically occur in 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 VITA VM 9).

| | Predry. °C |  min. |  min. |  °C/min. | Temp. approx. °C |  min. |  °C |  min. | VAC min. |
|---|------------|--|--|---|------------------|---|--|--|----------|
| Cleaning firing T | 500 | 3.00 | 6.00 | 33 | 700 | 5.00 | – | – | – |
| Cleaning firing HT | 290 | 10.00 | 31.00 | 10 | 600 | 5.00 | – | – | – |
| Regeneration firing (optional, see page 11) | 500 | 0.00 | 5.00 | 100 | 1000 | 15.00 | – | – | – |
| Firing - VITA EFFECT Bonder powder* | 500 | 6.00 | 6.00 | 80 | 980 | 1.00 | – | – | 6.00 |
| 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 |
| 1. dentin firing | 500 | 6.00 | 7.27 | 55 | 910 | 1.00 | 600*** | – | 7.27 |
| 2. dentin 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 |

* The user should consider this information only as a reference. If the surface quality or degree of transparency or glaze does not correspond to the firing result that is achieved under optimum conditions, the firing procedure must be adjusted accordingly. The critical 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.

** Indication range, see page 24






*** 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, along with, 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 critical 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 YZ T COLORING LIQUID | EFFECT BONDER | MARGIN | EFFECT LINER | CHROMA PLUS | ENAMEL |
|------------------------------|---------------------------|---------------|--------|--------------|-------------|--------|
| 0M1 | – | EB0 | M1 | EL1 | – | ENL |
| 0M2 | – | EB0 | M1 | EL1 | – | ENL |
| 0M3 | – | EB0 | M1 | EL1/EL2* | – | ENL |
| 1M1 | CLL/P | EB1 | M1/M7* | EL1/EL2* | – | ENL |
| 1M2 | CLL/P | EB1 | M1/M7* | EL2 | – | ENL |
| 2L1.5 | CLL/P | EB2 | M1/M7* | EL1/EL2* | CP2 | ENL |
| 2L2.5 | CLM | EB2 | M1/M4* | EL1/EL3* | CP2 | ENL |
| 2M1 | CLL/P | EB2 | M1/M4* | EL1/EL6* | CP2 | ENL |
| 2M2 | CLL/P | EB2 | M1/M4* | EL1/EL3* | CP2 | ENL |
| 2M3 | CLL/P | EB2 | M4 | EL2/EL4* | CP2 | ENL |
| 2R1.5 | CLL/P | EB2 | M1/M7* | EL1/EL6* | CP2 | ENL |
| 2R2.5 | CLM | EB2 | M1/M4* | EL2/EL4* | CP2 | ENL |
| 3L1.5 | CLM | EB3 | M4/M7* | EL2/EL6* | CP3 | ENL |
| 3L2.5 | CLM | EB3 | M4/M7* | EL4/EL6* | CP3 | ENL |
| 3M1 | CLL/P | EB3 | M7 | EL1/EL6* | CP3 | ENL |
| 3M2 | CLM | EB3 | M4/M7* | EL2/EL6* | CP3 | ENL |
| 3M3 | CLM | EB3 | M4/M9* | EL4/EL6* | CP3 | ENL |
| 3R1.5 | CLM | EB3 | M7 | EL2/EL3* | CP3 | ENL |
| 3R2.5 | CLM | EB3 | M4/M7* | EL5/EL6* | CP3 | ENL |
| 4L1.5 | CLM | EB4 | M7 | EL6 | CP4 | END |
| 4L2.5 | CLM | EB4 | M4/M9* | EL3/EL4* | CP4 | END |
| 4M1 | CLL/P | EB4 | M7 | EL6 | CP4 | END |
| 4M2 | CLM | EB4 | M7/M9* | EL2/EL3* | CP4 | END |
| 4M3 | CLM | EB4 | M9 | EL5/EL6* | CP4 | END |
| 4R1.5 | CLM | EB4 | M7/M8* | EL2/EL3* | CP4 | END |
| 4R2.5 | CLM | EB4 | M7/M9* | EL3/EL4* | CP4 | END |
| 5M1 | CLM | EB5 | M7/M8* | EL3/EL6* | – | END |
| 5M2 | CLM | EB5 | M7/M9* | EL5/EL6* | – | END |
| 5M3 | CLM | EB5 | M5/M9* | EL3/EL4* | – | END |

| VITA classical A1–D4 shades | VITA YZ T COLORING LIQUID | EFFECT BONDER | MARGIN | EFFECT LINER | CHROMA PLUS | ENAMEL |
|-----------------------------|---------------------------|---------------|--------|--------------|-------------|--------|
| A1 | CLL/P | EB1 | M1/M7* | EL2 | CP1 | ENL |
| A2 | CLM | EB2 | M4/M7* | EL1/EL3* | CP2 | ENL |
| A3 | CLM | EB2 | M4 | EL4/EL6* | CP2/CP3* | ENL |
| A3.5 | CLM | EB3 | M4/M9* | EL5/EL6* | CP2/CP3* | END |
| A4 | CLM | EB3 | M4/M9* | EL1/EL4* | CP2/CP4* | END |
| B1 | CLL/P | EB1 | M1/M4* | EL1/EL2* | CP1 | END |
| B2 | CLM | EB1 | M1/M4* | EL1/EL3* | CP1 | END |
| B3 | CLM | EB3 | M4 | EL2/EL4* | CP2/CP3* | END |
| B4 | CLM | EB3 | M4/M9* | EL4/EL6* | CP3 | END |
| C1 | CLL/P | EB3 | M1/M4* | EL1/EL6* | CP1 | END |
| C2 | CLM | EB2 | M4/M7* | EL2/EL6* | CP1/CP5* | END |
| C3 | CLM | EB3 | M4/M7* | EL6 | CP1/CP5* | ENL |
| C4 | CLM | EB4 | M4/M7* | EL3/EL6* | CP5 | ENL |
| D2 | CLM | EB2 | M1/M9* | EL2/EL6* | CP1/CP5* | END |
| D3 | CLM | EB3 | M4/M7* | EL2/EL3* | CP2/CP5* | END |
| D4 | CLM | EB3 | M1/M4* | EL2/EL6* | CP2/CP5* | END |

* Mixing ratio 1:1



VITA MODELLING FLUID RS

Red special liquid for mixing all dentine, incisal and additional materials. The smooth consistency of VITA MODELLING FLUID RS allows extended and wet processing, while ensuring good stability. The fluid is particularly suited for large-sized restorations and multi-unit bridges.



VITAVM® MODELLING LIQUID









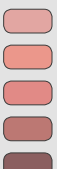



For mixing BASE DENTINE, TRANSPA DENTINE, ENAMEL and all additional materials.



VITA MODELLING FLUID

For mixing all dentine, incisal and additional materials. The MODELLING FLUID avoids rapid drying of the ceramic material. The liquid also causes increased plasticity when layering.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|-----|------------|-------------------------------|-----|--------------|------------------------|-----|-------------|----------------------|---|---------------|-------------|-----|------------------|-----------------------|--|--------|---------------------|---|-------------|--------------------|-----|-------|-----------------|-----|------------|--------------------|------|------------------|------|------|---------|---------------------|---|
| <p>VITAVM®9 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 material – to achieve a natural effect of depth |  | <table border="1"> <tbody> <tr><td>EE1</td><td>mint cream</td><td>whitish-translucent</td></tr> <tr><td>EE2</td><td>pastel</td><td>pastel</td></tr> <tr><td>EE3</td><td>misty rose</td><td>pink-translucent</td></tr> <tr><td>EE4</td><td>vanilla</td><td>yellowish</td></tr> <tr><td>EE5</td><td>sun light</td><td>yellowish-translucent</td></tr> <tr><td>EE6</td><td>navajo</td><td>reddish-translucent</td></tr> <tr><td>EE7</td><td>golden glow</td><td>orange-translucent</td></tr> <tr><td>EE8</td><td>coral</td><td>red-translucent</td></tr> <tr><td>EE9</td><td>water drop</td><td>bluish-translucent</td></tr> <tr><td>EE10</td><td>silver lake blue</td><td>blue</td></tr> <tr><td>EE11</td><td>drizzle</td><td>greyish-translucent</td></tr> </tbody> </table> | 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 |  |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>VITAVM®9 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 |  | <table border="1"> <tbody> <tr><td>EP1</td><td>pearl</td><td>shade in pastel-yellow</td></tr> <tr><td>EP2</td><td>pearl blush</td><td>shade in pastel-orange</td></tr> <tr><td>EP3</td><td>pearl rose</td><td>shade in pastel-rosé</td></tr> </tbody> </table> | EP1 | pearl | shade in pastel-yellow | EP2 | pearl blush | shade in pastel-orange | EP3 | pearl rose | shade in pastel-rosé |  | | | | | | | | | | | | | | | | | | | | | | | | |
| EP1 | pearl | shade in pastel-yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EP2 | pearl blush | shade in pastel-orange | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EP3 | pearl rose | shade in pastel-rosé | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>VITAVM®9 EFFECT OPAL</p> <ul style="list-style-type: none"> – to create the opal effect in restorations of young and translucent teeth |  | <table border="1"> <tbody> <tr><td>E01</td><td>opal</td><td>neutral, universally suitable</td></tr> <tr><td>E02</td><td>opal whitish</td><td>whitish</td></tr> <tr><td>E03</td><td>opal bluish</td><td>bluish</td></tr> <tr><td>E04</td><td>opal blue</td><td>blue</td></tr> <tr><td>E05</td><td>opal dark violet</td><td>dark violet</td></tr> </tbody> </table> | E01 | opal | neutral, universally suitable | E02 | opal whitish | whitish | E03 | opal bluish | bluish | E04 | opal blue | blue | E05 | opal dark violet | dark violet |  | | | | | | | | | | | | | | | | | | |
| E01 | opal | neutral, universally suitable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E02 | opal whitish | whitish | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E03 | opal bluish | bluish | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E04 | opal blue | blue | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E05 | opal dark violet | dark violet | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>VITAVM®9 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 – can also be used for the washbake; the firing temperature, however, must be 970°C |  | <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 |  | | | | | | | | | | | | | | | |
| EL1 | snow | white | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EL2 | cream | beige | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EL3 | tabac | brown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EL4 | golden fleece | yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EL5 | papaya | orange | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EL6 | sesame | green-yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>VITAVM®9 MARGIN</p> <ul style="list-style-type: none"> – 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 dryer or radiated heat from the furnace to stabilize the shoulder |  | <table border="1"> <tbody> <tr><td>M1</td><td>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 | beige | white | M4 | wheat | yellow | M5 | amber | amber | M7 | seashell | light beige | M8 | tan | pastel-brown | M9 | beach | light orange |  | | | | | | | | | | | | | | | |
| M1 | beige | white | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M4 | wheat | yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M5 | amber | amber | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M7 | seashell | light beige | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M8 | tan | pastel-brown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M9 | beach | light orange | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | |
|--|---|--|--|---|
| <p>VITAVM®9 SUN DENTINE</p> <ul style="list-style-type: none"> – to obtain a brighter or warmer shade, the respective TRANSPA DENTINE can either be mixed with SUN DENTINE or replaced by SUN DENTINE |  | <p>SD1</p> <p>SD2</p> <p>SD3</p> | <p>sun light light yellow</p> <p>sun rise light orange</p> <p>sun set orange-red</p> |  |
| <p>VITAVM®9 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 restorations with thin walls, they enhance the shade in an efficient manner |  | <p>CP1</p> <p>CP2</p> <p>CP3</p> <p>CP4</p> <p>CP5</p> | <p>ivory ivory</p> <p>almond beige</p> <p>moccasin light orange-brown</p> <p>caramel orange</p> <p>burlywood green-brown</p> |  |
| <p>VITAVM®9 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 |  | <p>EC1</p> <p>EC2</p> <p>EC3</p> <p>EC4</p> <p>EC5</p> <p>EC6</p> <p>EC7</p> <p>EC8</p> <p>EC9</p> <p>EC10</p> <p>EC11</p> | <p>ghost white</p> <p>linen sand-beige</p> <p>pale banana light yellow</p> <p>lemon drop tender lemon yellow</p> <p>golden rod light orange</p> <p>sunflower orange</p> <p>light salmon pink</p> <p>toffee beige-brown</p> <p>doe brown</p> <p>larch green-brown</p> <p>gravel green-grey</p> |  |
| <p>VITAVM®9 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 |  | <p>MM1</p> <p>MM2</p> <p>MM3</p> | <p>ecru beige</p> <p>mellow buff warm yellow-brown</p> <p>peach puff tender orange</p> |  |
| <p>VITAVM®9 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>G2</p> <p>G3</p> <p>G4</p> <p>G5</p> | <p>rose dusky pink</p> <p>nectarine orange-pink</p> <p>pink grapefruit pink</p> <p>rosewood brown-red</p> <p>cherry brown dark red</p> |  |
| <p>VITAVM®9 CORRECTIVE</p> <ul style="list-style-type: none"> – with reduced firing temperature (760°C) for corrections after glaze firing – in three nuances for neck, dentine and enamel areas |  | <p>COR1</p> <p>COR2</p> <p>COR3</p> | <p>neutral neutral</p> <p>sand beige</p> <p>ochre brown</p> |  |



Application of VITAVM®9 EFFECT BONDER to a non-colored zirconia substructure

For reliable shade reproduction, we recommend the use of VITA VM 9 EFFECT BONDER.

Apply a very thin coat of EFFECT BONDER powder that has been mixed with VITA VM OPAQUE FLUID (similar to a wash application).

Recommended firing VITAVM®9 EFFECT BONDER powder

| Predry. °C | → min. | ↗ min. | ↗ °C/min. | Temp. approx. °C | → min. | VAC min. |
|---------------|-----------|-----------|--------------|---------------------|-----------|-------------|
| 500 | 6.00 | 6.00 | 80 | 980 | 1.00 | 6.00 |

The user should consider this information only as a reference. If the surface quality or the degree of transparency or glaze does not correspond to the firing result that is achieved under optimum conditions, the firing procedure must be adjusted accordingly. The critical 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.



Completely fired EFFECT BONDER.

Only firing pad for ceramic may be used for firing!

Further steps to continue processing of VITA VM 9











Basic layering: see page 12 VITA VM 9 BASIC layering (starting from the application of VITAVM9 BASE DENTINE)

Further steps to continue processing of VITA VM 9

BUILD UP layering: see page 16 VITA VM 9 BUILD UP layering (starting from the application of VITA VM 9 BASE DENTINE)

| 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 acids | < 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 |
|  | — | ● |
|  | — | ● |
|  | — | ● |
|  | — | ● |
|  | ● | ● |
|  | ● | — |
|  | ● | ● |
|  | ● | — |
| Characterization | VITA AKZENT Plus | VITA AKZENT Plus |
| Individualization |  with all VITAVM 9 materials |  only with VITA VM 9 ADD-ON materials |

● recommended

Indication:

- **Overpressing technique**
Pressing to 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 YZ T.*
- **Substructure-free staining and layering technique**
Fabrication of inlays, onlays, veneers, partial crowns and crowns.

Layering Technique

- 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 processing instructions and the guidelines on substructure design recommended by VITA are observed, VITA PM 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.



| 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 MODELLING FLUID RS |
| – | – | 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 MODELLING FLUID RS |

* 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 MODELLING FLUID RS |
| 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 MODELLING FLUID RS |
| 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 margin areas | | |
| 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 |



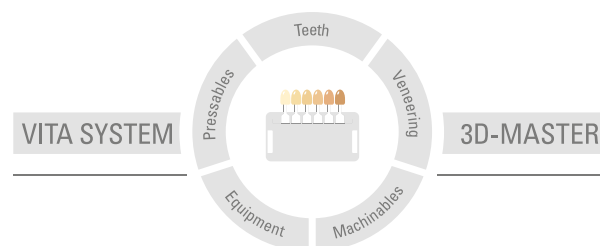
| VITAVM®9 ESTHETIC KIT for VITABLOCS | | |
|---|---------|--|
| Additional assortment for individualizing VITABLOCS | | |
| Quantity | Content | Material |
| 1 | Set | VITABLOCS 3D-MASTER (10 pieces of Mark II 112) |
| 1 | 12 g | WINDOW WIN |
| 1 | 12 g | NEUTRAL NT |
| 2 | 12 g | ENAMEL ENL, END |
| 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 / liquids |
| 1 | – | Working Instructions |

| | | |
|---|---|---|
| Safety at work and health protection | When working with the product, wear suitable safety goggles/ face protection, gloves and safety clothing. |  |
|---|---|---|

| | |
|-------------------------------|---|
| IMPORTANT INFORMATION: | Information on troubleshooting can be found under FAQs - all-ceramics - on our website. |
|-------------------------------|---|

VITAVM9 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 A1–D4 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 applications. 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 and this results in damage. The VITA Modulbox is not necessarily a component of the product. Date of issue of this information: 12.18

After the publication of this 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 **CE 0124**:

VITAVM⁹ · VITAPM⁹ · VITABLOCS[®] · VITA YZ[®] · VITA AKZENT[®] Plus

VITA

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