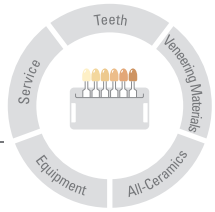
VITA**VM**®**9**

Working Instructions

VITA shade taking | VITA shade communication | VITA shade reproduction | VITA shade control

Date of issue 09.11

VITA SYSTEM 3D-MASTER



VITA

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

VITA SYSTEM 3D-MASTER 3

Fine-structure ceramic 4

Data – facts 5

Indication range 6

Facts worth knowing about the CTE 7

Firing result 8

Substructure design and layer thicknesses 9

Material-scientific aspects of VITA In-Ceram YZ 10

VITA VM 9 in combination with VITA In-Ceram YZ 11

Expansion cooling when veneering zirconium dioxide substructures 11

Procedure for VITA In-Ceram YZ 12

Processing information on YZ COLORING LIQUID for VITA In-Ceram YZ 13

BASIC layering 14

BUILD UP layering 18

Firing chart 23

Classification tables 24

Liquids 25

Additional materials 26

VITA VM 9 in combination with VITA PM 9 28

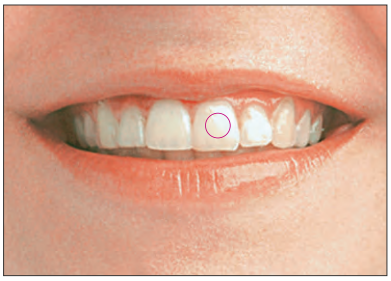
VITA VM 9 in combination with VITABLOCS 30

Assortments 32

Information 35

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 cleverly 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 last step, qualitative shade evaluation is no longer 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 satified 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. $10.5 \cdot 10^{-6} \cdot K^{-1}$. 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 is similar to that of enamel. Accordingly, the BASE DENTINE and TRANSPA DENTINE porcelains which have been perfectly matched within the VITA SYSTEM 3D-MASTER allow the production of restorations with a highly natural appearance. The use of fluorescent and opalescent additional materials results in individual and aesthetically 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 structure is defined as fine structure.

Figure 1:
The etched surface of a ceramic with conventional structure (etched with VITA CERAMICS ETCH for 20 sec) reveals agglomerates of leucite crystals with diameters up to 30 µm. The differences in the CTE of the leucite agglomerates and the glass phase frequently result in stress cracks which can be seen at the bright rims of the cracks in the photo.

Figure 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.

Favorable surface condition
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.

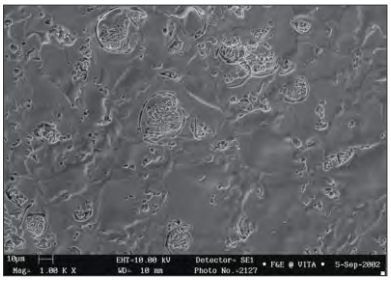


Fig 1: SEM photo of the surface of a ceramic with a conventional structure (magnification 5000 x).

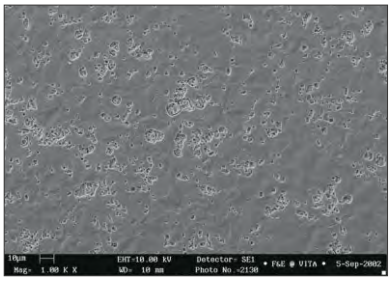
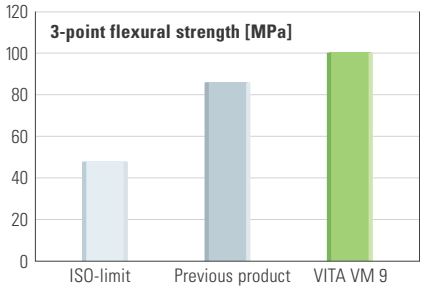


Fig 2: SEM photo of the surface of VITA VM 9 (magnification 5000 x)

Physical properties

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



Flexural strength

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

VITA**VM®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 acids	µg/cm²	approx. 10
Average particle size	µm (d_{50})	approx. 18
3-point flexural strength	MPa	approx. 100

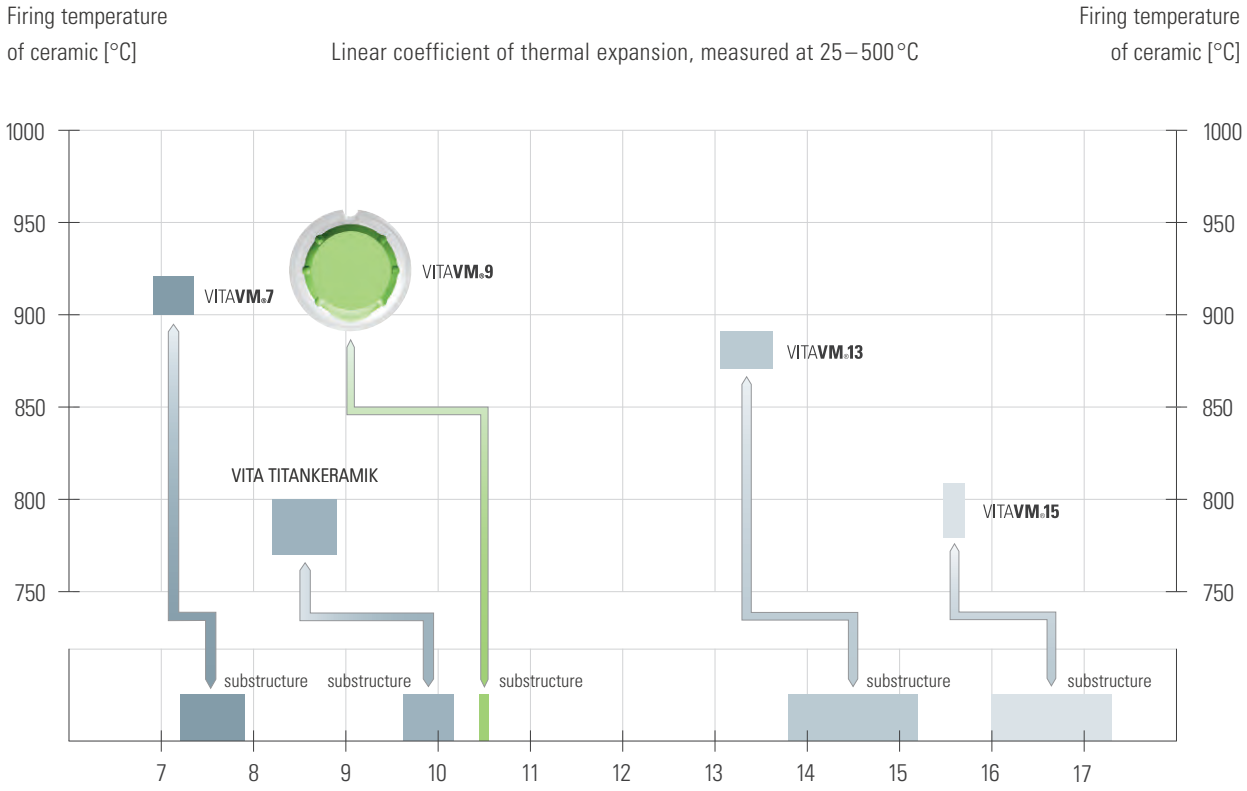
Similarity to enamel

In a study carried out by McLaren (UCLA School of Dentistry, UCLA Center for Esthetic Dentistry, Los Angeles, CA) and Giordano (Goldman School of 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 framework 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.

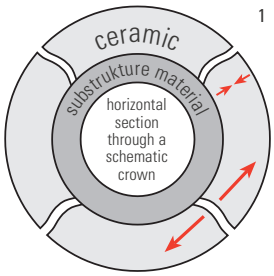
– for veneering zirconium dioxide substructure materials in the CTE range of approx. 10.5 such as VITA In-Ceram
– for individualizing VITABLOCS
– for individualizing VITA PM 9 restorations



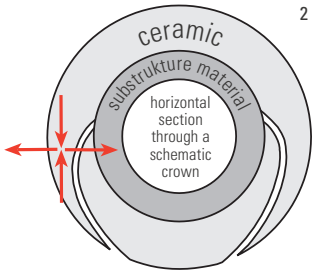
Linear coefficient of thermal expansion, measured at 25–500 °C
(alloys at 25–600 °C)

VITA VM 7 CTE (25–500 °C) 6.9–7.3 · 10^{-6} · K^{-1}	VITA In-Ceram ALUMINA, CTE (25–500 °C) 7.2–7.6 · 10^{-6} · K^{-1} VITA In-Ceram SPINELL, CTE (25–500 °C) 7.5–7.9 · 10^{-6} · K^{-1} VITA In-Ceram ZIRCONIA, CTE (25–500 °C) 7.6–7.8 · 10^{-6} · K^{-1} VITA In-Ceram AL, CTE 25–500 °C) approx. 7.3 · 10^{-6}· K^{-1}
VITA TITANKERAMIK CTE (25–500 °C) 8.2–8.9 · 10^{-6} · K^{-1}	For titanium and titanium alloys CTE of titanium (25–500 °C), approx. 9.6 · 10^{-6} · K^{-1} CTE of Ti6Al4V (25–500 °C), approx. 10.2 · 10^{-6} · K^{-1}
VITA VM 9 **CTE (25–500 °C) 9.0–9.2 · 10^{-6} · K^{-1}**	**VITA In-Ceram YZ, CTE (25–500 °C), approx. 10.5 · 10^{-6} · K^{-1}** **VITABLOCS, CTE (25–500 °C) approx. 9.4 · 10^{-6} · K^{-1}** **VITA PM 9, CTE (25–500 °C) 9.0 - 9.5 · 10^{-6} · K^{-1}**
VITA VM 13 CTE (25–500 °C) 13.1–13.6 · 10^{-6} K^{-1}	High gold content, reduced precious metal content, palladium based and non-precious alloys CTE (25–600 °C) 13.8–15.2 · 10^{-6} · K^{-1} *
VITA VM 15 WAK (25–500 °C) 15.5–15.7 · 10^{-6} · K^{-1}	Multi-indication alloys CTE (25–600°C) 16.0–17.3 · 10^{-6} · K^{-1} *

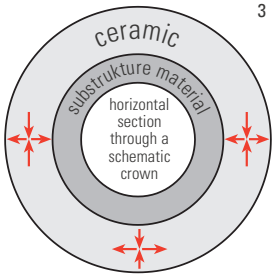
* visit the download section of our website for more information about alloys



If the CTE of the substructure material is **considerably lower** than the CTE of the veneering ceramic, tangential tensile stress will increase and form 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 flaking.



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.

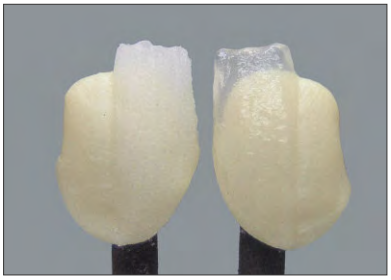
Optimal preconditions are given if the veneering ceramic features a somewhat lower CTE value than the substructure material. Due to adhesive bonding, the ceramic must follow the thermal behavior of the substructure material. If cooled down, the ceramic is exposed to slight tangential compressive stress.

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.

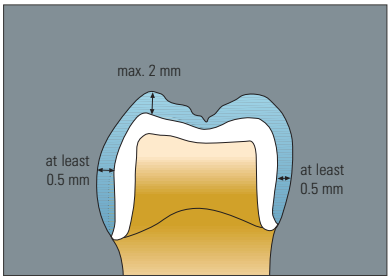
When using dental ceramics, the firing result largely depends on the individual firing procedure of the user. The type of furnace, the location of the temperature sensor, the firing tray as well as the size of the workpiece during the firing cycles are key factors for the final restoration. Our application-technical recommendations for the firing temperatures (regardless whether they have been provided orally, in writing or in the form of practical instructions) are based on numerous experiences and tests. The user, however, should consider this information only to provide basic values.

⚠ **Note:** Firing trays may also have a major 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°C - from the reference value given depending on the furnace and needs to be raised accordingly.

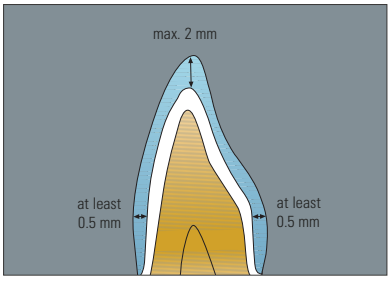
The crucial factors for the firing procedure are not the firing temperature displayed by the furnace but the appearance and the surface condition of the firing object after the firing process.



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 of premolars and molars



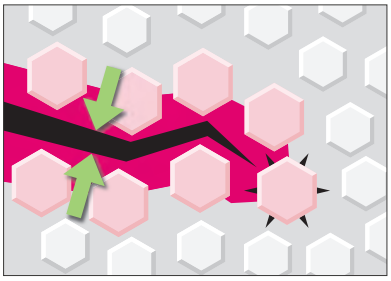
Veneering of anterior teeth

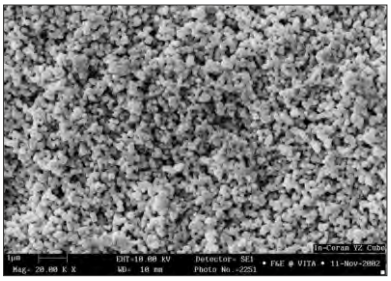
Zirconium dioxide crowns and bridge units to be veneered with ceramic must have a reduced anatomical size. The wall thickness of crowns must be at least 0.5 mm and that of bridges must be at least 0.7 mm.

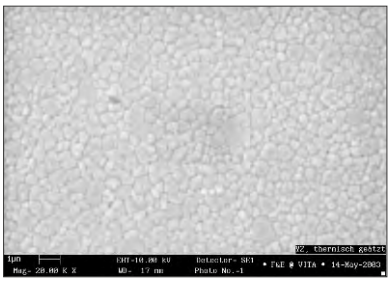
A table with details on further indications can be found in the Working Instructions for VITA In-Ceram YZ (No. 1128).

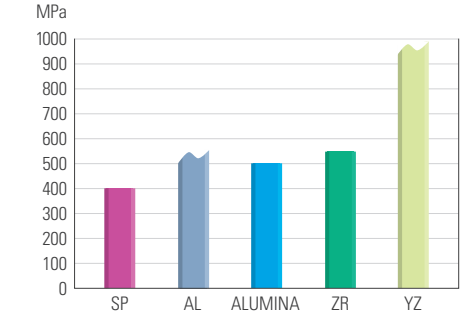
Layer thicknesses for ceramics

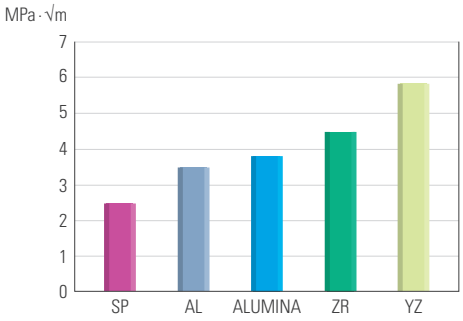
When preparing a ceramic veneer, a uniform layer thickness across the entire surface to be veneered must be ensured.
The entire thickness of the ceramic layer, however, should not exceed 2 mm (the optimum layer thickness ranges from 0.7 to 1.2 mm).











Zirconium dioxide (ZrO_2) is an oxide ceramic material with numerous fascinating properties – from its translucency in case of thin walls and its bright color up to its excellent biocompatibility. An additional feature is the superior flexural strength among oxide ceramic materials.

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 process is referred to as transition strengthening. The compressive stress resulting in the structure (see fig. 1 - green arrows) avoids uninhibited crack growth and thus the failure of the ceramic – a behavior which creates a stress and elongation progress which is otherwise only known from steel. This is why zirconium dioxide is also referred to as "ceramic steel"*. This property also ensures the high durability of zirconium dioxide under continuous load.

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. As a result high-strength and accurate substructures are obtained which feature all physical advantages of zirconium dioxide.

Fig. 1: Schematic view of the phase transition process of ZrO_2

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

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

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

VITA**VM**®**9** in combination with VITA In-Ceram® YZ

Mechanical surface treatment such as grinding with diamond tools and sandblasting may supply hypercritical quantities of energy to the zirconium dioxide 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 tension 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 zirconium dioxide 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 bars 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

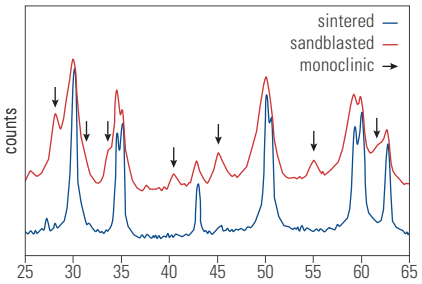


Fig. 1: X-ray diffraction diagram of a Y-TZP (blue) and its phase transition after sandblasting (red).

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.

VITA**VM**®**9** Expansion cooling when veneering zirconium dioxide substructures

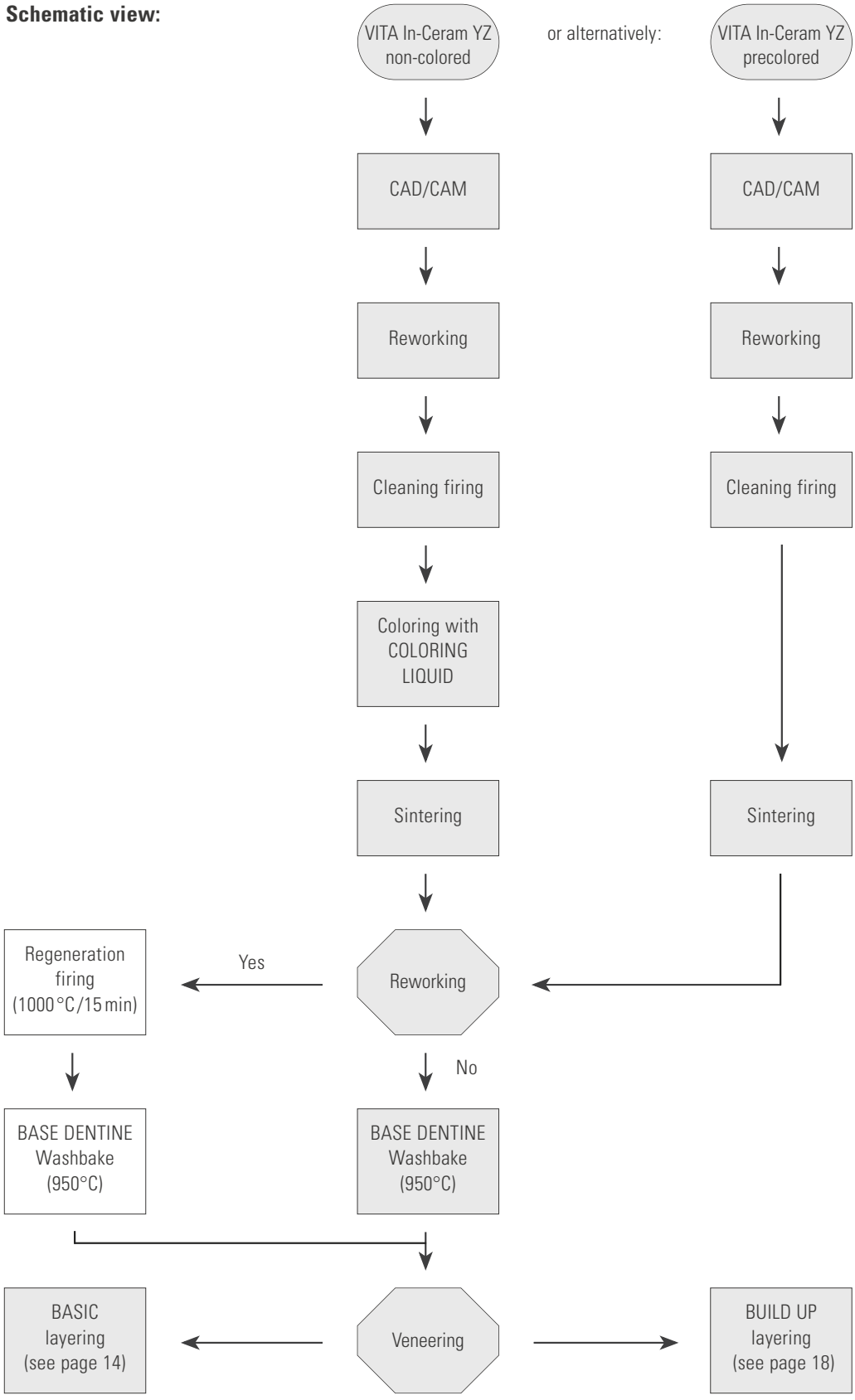
Scientific studies and ongoing market observation have formed the basis of VITA Zahnfabrik's recommendations for decades in order to offer customers the best possible solution for dental restorations. New results confirm that great care is required particularly when veneering and handling zirconium dioxide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

Owing to the poor thermal conductivity of both materials (Y-TZP and veneering ceramic), more severe residual stress can occur in this compound system than is known to occur in the case of metal ceramics. This residual thermal stress in the veneering ceramic, particularly 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 in the case of 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 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.
- Anatomical framework structures must be designed to support the veneering ceramic.
- 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 und 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 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®

Predr. °C	→ min.	↗ min.	↗ °C/min.	approx. temp. °C	→ min.	VAC min.
500	3.00	6.00	33	700	5.00	–

In accordance with the shade to be reproduced, the restoration is immersed into the liquid in the working container.
The recommended immersion time is 2 minutes. When dipping the restoration in, vacuum or pressure (2 bars) may be used.

⚠ **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 the wet condition.

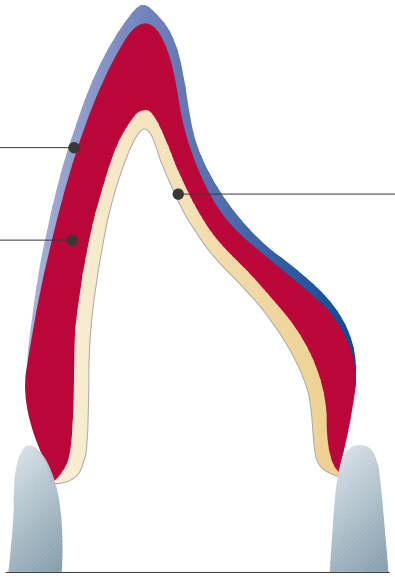
The substructure may be colored at the outside and inside of the margins to achieve complete penetration of the color.

⚠ **Attention:** The application brush should only be used to apply COLORING LIQUID! We recommend a flat brush. This brush should not be used for layering 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



Colored all-ceramic substructure (CTE approx. 10.5)

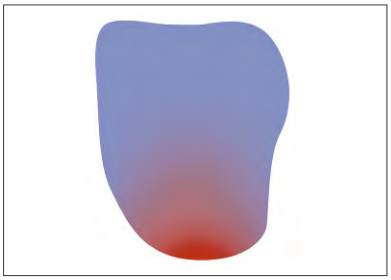
VITA VM 9 BASE DENTINE

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. This two-layer variation offers an ideal solution in particular for the reproduction of the optimal shade of restorations with thin walls. Additionally, the intensive shade effect of the BASE DENTINE porcelains permits a variable use of the ENAMEL porcelains 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 produce a more intense and warmer shade, the respective TRANSPA DENTINE can be mixed with SUN DENTINE or replaced entirely by SUN DENTINE. However, when using Chroma Plus or Sun Dentine, the final result of the restoration may differ 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 removal of the restoration more easily later on, the model must be previously separated using the VITA Modisol pen.

Washbake firing
To achieve adequate bonding of colored VITA In-Ceram YZ 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 whilst ensuring uniform coverage.

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

Recommended firing

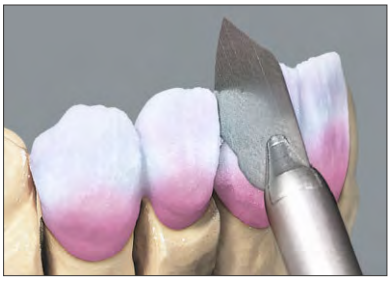
Predr. °C	→ min.	↗ min.	↗ °C/min.	approx. temp. °C	→ min.	VAC min.
500	2.00	8.11	55	950	1.00	8.11

Application of VITA**VM**®**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 occlusion, laterotrusion and protrusion should be checked in the articulator 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 VITA**VM®9 ENAMEL**
Apply several small portions of ENAMEL beginning from the central third of the crown. To compensate for firing shrinkage, the crown 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 1st dentine firing*

Predr. °C	→ min.	↗ min.	↗ °C/min.	ca. Temp. °C	→ min.	VAC min.
500	6.00	7.27	55	910	1.00	7.27

* Recommended extended firing of large restorations can be found on page 23.

Restoration after first dentine firing.

Corrections of shape / further layering
The model is separated with the VITA Modisol pen again. The interproximal spaces and the basal surface of the pontic must be filled with BASE DENTINE.

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

Recommended firing 2nd dentine firing*

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

* Recommended extended firing of large restorations can be found on page 23.

Bridge and crown after second dentine firing.

Finishing

Finish the bridge or crown. Prior to glaze firing, the entire surface must be ground evenly and then grinding dust must be thoroughly removed.

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

If required, the entire restoration can be coated with VITA AKZENT Glaze and then individualization can be carried out using the VITA AKZENT stains. (Please refer to Working Instructions for VITA AKZENT, No. 771)

Recommended firing Glaze firing with VITA AKZENT®*

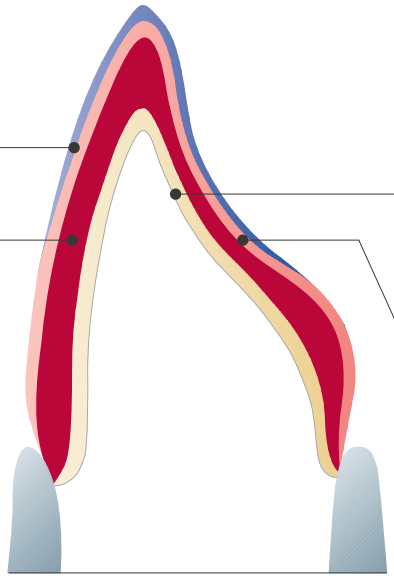
Predr. °C	→ min.	↗ min.	↗ °C/min.	approx. temp. °C	→ min.	VAC min.
500	4.00	5.00	80	900	1.00	–

* Recommended extended firing of large restorations can be found on 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 highly suitable.

VITA VM 9 ENAMEL



Colored all-ceramic substructure (CTE approx. 10.5)

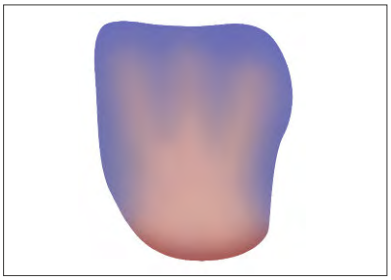
VITA VM 9 BASE DENTINE

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.

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



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 determined by the BASE DENTINE material. Just like in natural teeth, the TRANSPA DENTINE materials only result in a harmonious transition towards the enamel.

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

To produce a more intense and warmer shade, the respective TRANSPA DENTINE can be mixed with SUN DENTINE or replaced entirely by SUN DENTINE. However, when using Chroma Plus or Sun Dentine, the final result of the restoration may differ 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 easier removal of the restoration later on, the model must be previously separated using the VITA Modisol pen.

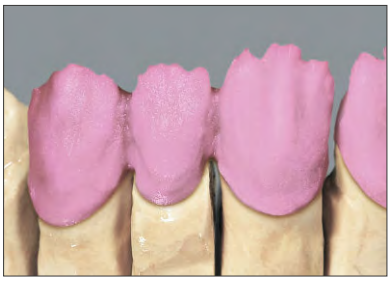
Washbake firing
To achieve proper bonding between colored VITA In-Ceram YZ substructures and VITA VM 9, we recommend carrying out a BASE DENTINE washbake. The BASE DENTINE powder is mixed with MODELLING LIQUID to obtain a thin aqueous mixture and applied very thinly to the dry and clean substructure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

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

Recommended firing

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

Application of VITA**VM®9 BASE DENTINE**
Apply the desired shade of BASE DENTINE that has been mixed with MODELLING LIQUID in a reduced tooth shape starting from the neck across the entire surface to be veneered. The occlusion, laterotrusion and protrusion should be checked in the articulator during this stage.



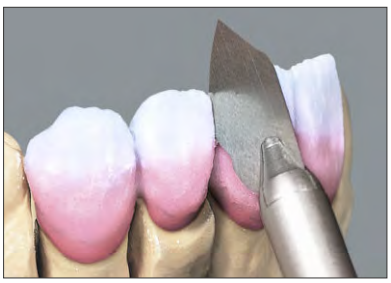
Completely layered BASE DENTINE.

Application of VITA**VM®9 TRANSPA DENTINE**
TRANSPA DENTINE is applied in the complete tooth shape.

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

Application of VITA**VM®9 ENAMEL**
To complete the crown, apply several small portions of ENAMEL to the upper third of the crown.
To compensate firing shrinkage, the crown must 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 interproximal areas down to the substructure.

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

Recommended firing 1st dentine firing*

Predr. °C	→ min.	↗ min.	↗ °C/min.	ca. Temp. °C	→ min.	VAC min.
500	6.00	7.27	55	910	1.00	7.27

* Recommended extended firing of large restorations can be found on page 23.

Restoration after first dentine firing.

Corrections of shape / further layering
Use the VITA Modisol pen to separate the pontic of the model once more. The interproximal spaces and the basal surface of the pontic must be filled with BASE DENTINE.

Subsequent corrections of shape in the body area using TRANSPA DENTINE…

… and ENAMEL in the incisal area.

Recommended firing 2nd dentine firing*

Predr. °C	→ min.	↗ min.	↗ °C/min.	ca. Temp. °C	→ min.	VAC min.
500	6.00	7.16	55	900	1.00	7.16

* Recommended extended firing of large restorations can be found on page 23.

Bridge and crown after second dentine firing.

Finishing
Finish the bridge or crown. Prior to glaze firing, the entire surface must be ground evenly and grinding particles must be removed.

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

If required, the entire restoration can be coated with VITA AKZENT Glaze and then individualization can be carried out using the VITA AKZENT stains.
(see Working Instructions for VITA AKZENT, No. 771)

Recommended firing Glaze firing with VITA AKZENT*

Predr. °C	→ min.	↗ min.	↗ °C/min.	ca. Temp. °C	→ min.	VAC min.
500	4.00	5.00	80	900	1.00	–

* Recommended extended firing of large restorations can be found on 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 glazed firing have proved to be highly suitable.

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

	Predr. °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
1st dentine firing	500	6.00	7.27	55	910	1.00	**600****	–	7.27
2nd 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 VITA AKZENT	500	4.00	5.00	80	900	1.00	**600****	–	–
Corrective firing with CORRECTIVE*	500	4.00	4.20	60	760	1.00	**500****	–	4.20

* Indication range see pages 26/27

** 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 objects 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 workpiece during the firing cycles.

Our application-technical recommendations for the firing temperatures (regardless whether they have been provided orally, in writing or in the form of practical instructions) are based on numerous experiences and tests. The user, however, should consider this information only to provide basic values.

If surface, transparency and degree of gloss do not correspond to the firing result that is achieved under optimal conditions, the firing procedure 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 firing object after the firing process.

Explanation of the firing parameters:

Predr. °C	Start temperature
→	Predrying time in min, closing time
↗	Heating time in min
↗	Temperature rise rate in degrees Celsius per minute
approx. temp. °C	End temperature
→	Holding time for end temperature
↘	Long-term cooling
VAC min.	Vacuum holding time

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

VITA SYSTEM 3D-MASTER shades	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	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

VITA**VM**® **MODELLING LIQUID**
For mixing the BASE DENTINE, TRANSPA DENTINE,
ENAMEL and all additional materials.

VITA MODELLING FLUID (not included in the assortment)
For mixing all dentine, incisal and additional materials.
VITA MODELLING FLUID avoids rapid drying of the ceramic material.
Moreover increased plasticity during layering is achieved.

VITA VM®9 EFFECT ENAMEL
– can be used for all enamel areas of the natural tooth
– universally suitable, translucent enamel effect porcelains
– 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	

VITA VM®9 EFFECT PEARL
– only suitable for effects on the surface, not for layering in
– perfectly suitable for bleached reproductions
– 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	

VITA VM®9 EFFECT OPAL
– to obtain the opal effect in restorations of young and highly translucent teeth

EO1	opal	neutral, universally suitable	
EO2	opal whitish	whitish	
EO3	opal bluish	bluish	
EO4	opal blue	blue	
EO5	opal dark violet	dark violet	

VITA VM®9 EFFECT LINER
– to control the fluorescence in the restoration
– universally suitable to support and intensify the basic shade
– applied in the gingival area, they support the shade
– 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	

VITA VM®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	icy beige	white	
M4	wheat	yellow	
M5	amber	amber	
M7	seashell	light-beige	
M8	tan	pastel-brown	
M9	beach	light-orange	

VITA VM®9 SUN DENTINE – to produce a more intense and warmer shade, the respective TRANSPA DENTINE can be mixed with SUN DENTINE or replaced entirely by SUN DENTINE	SD1	sun light	light yellow	
	SD2	sun rise	light orange	
	SD3	sun set	orange-red	
VITA VM®9 CHROMA PLUS – color-intensive porcelains which are preferably used in combination with BASE DENTINE – in case of thin walls, they support the shade in an efficient manner	CP1	ivory	ivory-colored	
	CP2	almond	beige	
	CP3	moccasin	light orange-brown	
	CP4	caramel	orange	
	CP5	burlywood	green-brown	
VITA VM®9 EFFECT CHROMA – color-intensive modifier porcelains – to accentuate certain color areas of the tooth – to increase 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	
VITA VM®9 MAMELON – highly fluorescent porcelain which is mainly used in the incisal area – for shade characterization between dentine and enamel	MM1	ecru	beige	
	MM2	mellow buff	warm yellow-brown	
	MM3	peach puff	tender orange	
VITA VM®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	black-red	
VITA VM®9 CORRECTIVE – with reduced firing temperature (760°C) for corrections after glaze firing – three levels for neck, dentine and enamel areas	COR1	neutral	neutral	
	COR2	sand	beige	
	COR3	ochre	brown	

The material

VITA PM 9 (Pressable Material) is based on the proven fine-structure feldspar ceramic VITA VM 9 and is used for overpressing partially yttrium-stabilized ZrO_2 substructures in the CTE range of 10.5 $\cdot 10^{-6} \cdot K^{-1}$ such as substructures made from 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 zirconium oxide support may only be cut back minimally to exclusively individualize them with VITA VM 9 ADD-ON materials later on. These substructure-free restorations require adhesive cementation.
The VITA PM 9 press pellets exhibit natural fluorescence to fulfill the patients' wishes for individual aesthetic 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 zirconium dioxide
  - Staining technique
  - Layering technique or a combination of both
- Excellent bonding to yttrium-stabilized ZrO_2 substructures
- The fine-structure composition of VITA PM 9 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

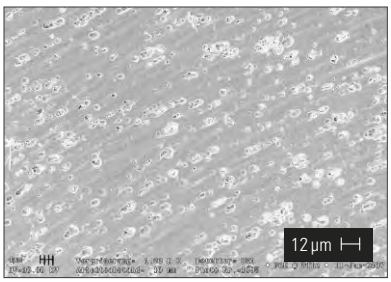


Fig. 1 SEM photo of the etched structure of a VITA PM 9 restoration with a very uniform structure of the leucite crystals (etched with 5 % HF for 120 sec., magnification x 1000)

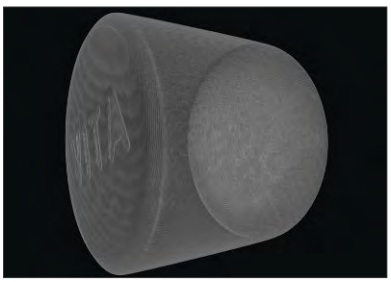


Fig. 2 Computer tomographic image (perspective) of a VITA PM 9 press pellet. The structure of the ceramic does not reveal any defect.

VITA**PM®9 – Technical data***	
Property	Value
WAK (25–500 °C)	9.0–9.5 · 10^{-6} · K^{-1}
Flexural strength	ca. 100 MPa
Acid resistance	< 20 µg/cm^2

* The technical / physical values are typical measuring results and refer to internal samples and measurements carried out with measurement equipment available on site. If samples are prepared using different methods and measurement equipment, other measuring results may be obtained.

	VITA**PM®9**	
	Overpressing technique	Substructure-free staining and layering technique
	–	●
	○	●
	–	●
	○	●
	●	●
	●	–
	●	●
	●	–
Characteri-zation	VITA AKZENT	VITA AKZENT
Individuali-zation	 with all VITA VM 9 materials	 only with VITA VM 9 ADD-ON materials

● recommended ○ possible

Indication:

- **Overpressing technique**
  overpressing of colored and non-colored partially yttrium-stabilized ZrO_2 crown and bridge substructures in the CTE range of approx. 10.5·10^{-6}·K^{-1} such as substructures made from VITA In-Ceram YZ.*
- **Substructure-free staining and layering technique**

Individualizing
Overpressing technique:
With all VITA VM 9 materials.

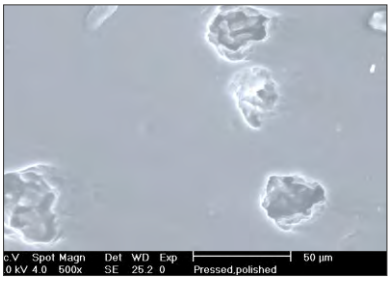
Substructure-free staining and layering technique:
With VITA ADD-ON materials.
Subsequent glazing with Glaze LT.

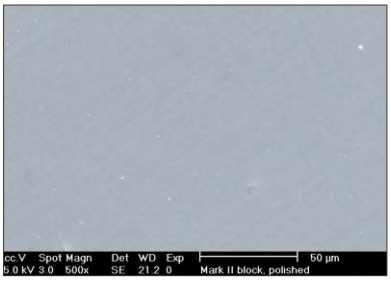
Characterization
With the stains of the VITA AKZENT assortment.

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

For detailed processing of 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

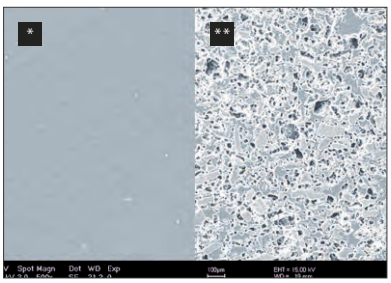
The advantages of the material and processing properties of the VITABLOCS proven by scientific studies have been confirmed by over 16 million clinically successful restorations made of this material to date. The VITABLOCS Mark II were rated to be the best material in the CRA newsletter (06/2006). The clinical success rate of inlays and full crowns made of VITABLOCS Mark II 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 the clinical abrasion of the restorations made of VITABLOCS Mark II corresponded to that of natural tooth enamel.

VITABLOCS: The chameleon among the ceramics

The high translucency of VITBLOCS 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 aesthetically perfected with the porcelains of the VITA VM 9 ESTHETICS KIT, VITA SHADING PASTE or VITA AKZENT.

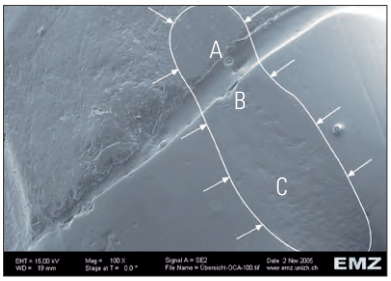
Fig. 1: Press ceramic (magnification 500 x)
Fig. Russell A. Giordano, DMD, DMSc, Boston University.

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



High quality and antagonist friendly

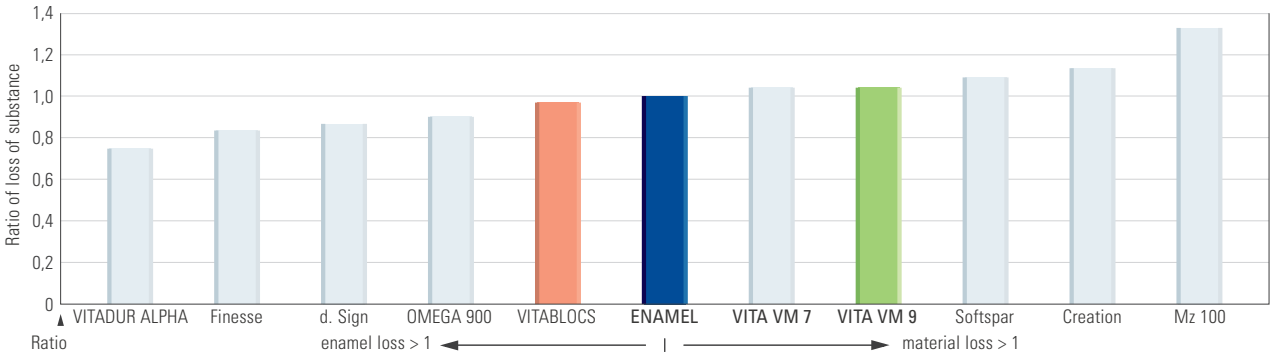
The unique fine structure of the VITABLOCS ceramic and the industrial sintering process at over 1150 °C provide perfect conditions for distinct advantages such as the good polishing properties and superior abrasion resistance of restorations. Restorations made of VITABLOCS abrade the enamel antagonist 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.

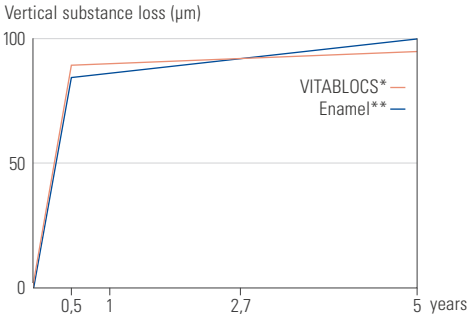
Fig. 3: SEM of the VITABLOCS® surface (magnification 1000 x), to the left: polished, to the right: etched for 60 seconds. The uniform and highly retentive etching pattern caused by homogeneous distribution of the crystal and glass phase can be recognized.
* Prof. Dr. Russel A. Giordano II, Boston University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

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



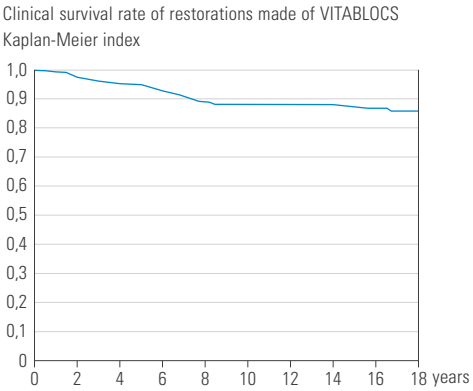
Abrasion properties of various ceramic materials
The abrasion behavior of the VITABLOCS ceramic is very similar to that of natural tooth enamel. The left half of the diagram shows the increasing enamel loss caused by abrasion. The right half shows the increasing substance loss of the test material.

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



Wear on the 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, Quintessenz 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 for CEREC, Dr. B. Reiss, Malsch in: International Journal of Computerized Dentistry 2006; 9:11-22

Indication VITABLOCS						
						Individualization
●	●	●	●	●	●	VITA VM 9

● recommended

VITA**VM®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 selection of materials
** also available as BASIC KIT classical in the VITA classical A1-D4 shades and as BASIC KIT SMALL classical in the following six shades: A1, A2, A3, A3.5, B3, D3
*** also available in 50 g

VITA**VM®9 BUILD UP KIT***/**
Add-on assortment for the 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 SMALL with reduced selection of materials
** also available as BUILD UP KIT classical in the VITA classical A1-D4 shades and as BUILD UP KIT small classical with 6 shades
*** also available in 50 g

VITA**VM®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 shade guide
1	–	Working instructions

* assortment for VITA VM 9 3D-MASTER users who want to add VITA classical A1-D4 shades to their current range of materials

VITA**VM®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

VITA**VM®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)

VITA**VM®9 GINGIVA KIT**
Gingiva materials with natural effects

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

VITA**VM®9 MARGIN KIT** For minor corrections in the margin area		
Quantity	**Content**	**Material**
6	12 g	MARGIN M1, M4, M5, M7, M8, M9
1	–	MARGIN shade guide

VITA**VM®9 ADD-ON KIT** For individualizing substructure-free, pressed VITA PM 9 restorations		
Quantity	**Content**	**Material**
8	12 g	ADD-ON ADD1–ADD8
1	7,5 g	VITA GLAZE LT
1	50 ml	VITA VM MODELLING LIQUID
1	20 ml	VITA AKZENT Fluid
–	–	Accessories
1	–	ADD-ON shade guide
1	–	VITA PM 9 Working instructions

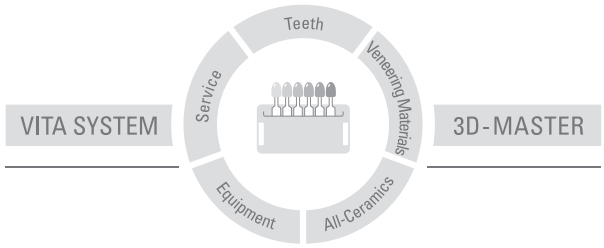
VITA**VM®9 ESTHETIC KIT for VITABLOCS** Additional assortment for individualizing VITABLOCS		
Quantity	**Content**	**Material**
1	–	Sample Set of VITABLOCS 3D-Master
1	12 g	WINDOW WIN
1	12 g	NEUTRAL NT
2	12 g	ENAMEL ENL, END
1	12 g	EFFECT PEARL EP1
2	12 g	EFFECT ENAMEL EE1, EE10
1	12 g	CORRECTIVE COR1
1	5 g	AKZENT finishing agent Akz 25
1	7 g	Shading Paste glaze SP15
1	12 g	EFFECT OPAL EO2
2	12 g	EFFECT CHROMA EC1, EC4
1	12 g	MAMELON MM2
1	50 ml	VITA VM MODELLING LIQUID
1	15 ml	VITA Shading Paste Liquid
–	–	Accessories
1	–	Working instructions

Occupational safety, occupational health	When working, wear safety goggles / face protection, safety gloves and protective clothes.	

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

VITA VM 9 veneering ceramic 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 ensured.

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



Please note: Our products should be used according to the working instructions. We cannot be held liable for damages 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 porcelains and equipment from other manufacturers which are not compatible or not authorized for use with our product. Furthermore, our liability for the correctness of this information is independent of the legal ground and, in as far as legally permissible, is limited to the invoiced value of the goods supplied excluding turnover tax. In particular, as far as legally permissible, we do not assume any liability for profit loss, for indirect damages, for consequential damages or for claims of third parties 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 these working instructions 09.11

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 is certified according to the Medical Device Directive and the following products bear the CE mark CE 0124:

VITA**VM®9** · VITA**PM®9** · **VITABLOCS®** · **VITA In-Ceram® YZ** · **VITA AKZENT®**

US 5498157 A
AU 659964 B2
EP 0591958 B1

VITA

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