VITA**VM**®**LC**

Working Instructions VITA VM LC and VITA VM LC flow

Video tutorials with Jürgen Freitag, including processing tips, are available at www.vita-zahnfabrik.com

VITA shade determination | VITA shade communication | VITA shade reproduction | VITA shade control

Date of issue: 08.18

VITA – perfect match.

Light-curing microparticle composite for fixed and removable restorations for extraoral use. Available in VITA SYSTEM 3D-MASTER® and VITA classical A1 – D4® shades.

The VITA VM LC product range includes systematically matched components for fixed and removable restorations for extraoral use. Depending on the processing method that is preferred, layering can be carried out with paste or the combination of paste and flow materials.

VITA VM LC
The paste materials are particularly suited to sculpting and are ideal for fast application across larger surfaces in the dentine area.

VITA VM LC flow
The flowable flow materials are ideal for individualizing and intensifying the tooth-neck area, as well as for delicate and esthetic detailed work in the incisal area. The user can apply the materials with an instrument, a brush or directly from the syringe.

Details on the application areas of the individual materials start on page 29.
For details on compositions, see page 35.

Indication:
- Full and partial veneering of metal frameworks: crowns, bridges, telescopic crowns, implant suprastructures
- Inlays, veneers

Application areas:
- Individualization and layering-over VITA ENAMIC
- Veneering partially yttrium-stabilized ZrO_2 frameworks (CTE 10.0 - 10.5 · 10^{-6} · K^{-1}), such as VITA YZ SOLUTIONS
- Individualization of VITA acrylic teeth
- Reproduction of gingival areas
- Veneering of removable and partially removable dentures (according to the manufacturer's information) made of
  – polyether ether ketone (PEEK) with a filler content of up to 20%, such as BioHPP/Bredent
  – PEEK-OPTIMA LT1 polymer, such as Juvora, InnoBlanc Medical

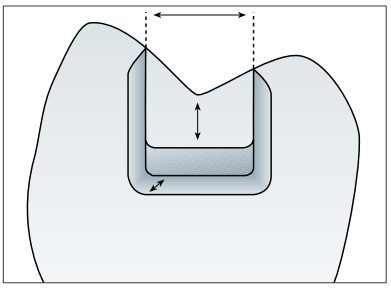
Long-term temporaries:
- Individualizing and layering-over long-term temporaries made from VITA CAD-Temp
- Metal-free crowns and three-unit anterior bridges made from VITA VM LC

⚠ **Note:** In the posterior area, a minimum thickness of the veneer of 1.5 mm in the central fissure and perfect occlusion must be ensured.

Contraindication:
- Occlusal dysfunctions or parafunctions, such as bruxism
- According to the manufacturer's instructions, all alloys and resin framework materials may be used for **frameworks**, which are suitable for veneering with composite.

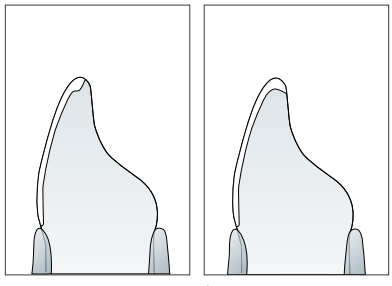
General information

- VITA VM LC is a type 2 light-curing microparticle composite, class 2, according to DIN EN ISO 10477.
- During processing, the light-curing VITA VM LC / VITA VM LC flow materials should not be exposed to strong artificial or strong natural light to avoid undesired polymerization.
- Contact with water and moisture must be avoided during layering. The veneer surface may only be cleaned with water after final polymerization.
- The VITA VM LC paste materials are adjusted thixotropically. This means that their consistency can be changed – from firmer to softer – by slightly pressing onto them with an instrument. Make sure to avoid inclusion of bubbles.
- Do not mix VITA VM LC paste and flow material with one another or with other composites. This may result in air inclusions and reduce the quality.
- After dispensing material, place the cap onto the syringe again and turn the plunger syringe back by at least one turn.
- During the layering process, the MODELLING LIQUID may only be used to wet the instruments and brushes slightly. Use very sparingly.
  The liquid must not be used to thin the materials. For more application areas, see page 32.
- Use VITA VM LC / VITA VM LC flow exclusively for the indications and application areas indicated on page 3.
- VITA VM LC / VITA VM LC flow products may only be used up to the expiration date indicated on the package.
- For information on safety, protective measures, storage conditions and cleaning, see page 36.



Preparation information - inlay

- box-shaped preparation without sharp edges
- the cavity margins must be entirely in the etchable enamel and outside articulation points
- minimum depth on the bottom of the fissure: 1.5 mm
- minimum isthmus width: 2 mm
- minimum width of the approximal shoulder: 1.5 mm
- the entire design of the preparation is similar to ceramics



1 2

Preparation information - veneer

- labial, anatomical reduction of the hard tooth substance by 0.7 – 1.0 mm
- supragingival preparation
- slightly rounded shoulder in the cervical area parallel to the gingival margin
- chamfer-like approximal margins, saddle-shaped embracing
- retain approximal, natural contact points
- chamfer-like embracing of the incisal edge (1) or incisal reduction with rounded edge (2), minimum incisal thickness of the veneer: 1 mm

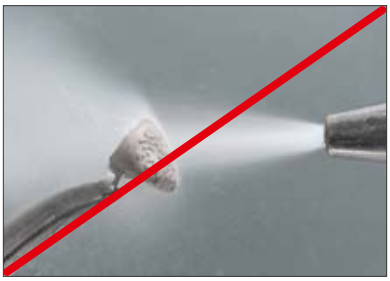
Retentions increase the bond strength and are generally recommended for all types of alloys. Their use is absolutely necessary for high-gold content alloys. Local placement of retentions is preferred for esthetic reasons when only limited space is available. If sufficient space is available, it is recommended to place the retentions across the entire surface. The information provided by the manufacturer of the bonding system must always be observed. When veneering electroplated secondary elements, microretentions or undercuts must be attached to the tertiary structures or suprastructures.

The framework is prepared using cross-cut milling tools in accordance with the specifications of the alloy manufacturer. Surfaces not to be veneered, in particular occlusal surfaces, are polished with rubber polishers.

Depending on the type of alloy, all surfaces to be veneered must be carefully sandblasted with 110–250 µm aluminium oxide (disposable abrasive material) at a pressure of 2.5–3.5 bar. Generally, the instructions of the alloy manufacturers should be adhered to.

The metal framework is cleaned after sandblasting. Use only dry compressed air (with water separator) or a clean dry brush for cleaning.

After cleaning, one of the recommended bonding systems is applied (see page 6). The procedure is based on the current version of the manufacturer's processing instructions. PRE OPAQUE or OPAQUE/OPAQUE PASTE are applied immediately after cleaning.



Contact with water and moisture must be avoided!

In the event of contact with the skin, the surface must be sandblasted again.

The following bonding systems have been tested and approved by VITA for reliable bonding between metal and composite.

– GC METAL PRIMER Z, GC METAL PRIMER II
– Kuraray Alloy Primer (recommended procedure, see below)
– Heraeus Kulzer Signum Metal Bond I + II
– Shofu Primer
– Shofu MZ Primer Plus
– 3M Espe Rocatec with Espesil

The procedure is based on the current version of the manufacturer's processing instructions. VITA VM LC can be processed with bonding systems, which condition the framework material for subsequent application of a light curing opaque, based on methyl methacrylate.

In all cases, however, the suitability for processing with VITA VM LC must be checked before using bonding systems of other manufacturers. This applies also to the bonding systems listed above. VITA Zahnfabrik does not assume any liability for damage resulting from lack of suitability of bonding systems of other manufacturers for processing with VITA VM LC and from any product modifications or quality defects of the bonding system in use. The same shall apply to damage resulting from improper handling or processing, as well as for damage resulting from inappropriate or faulty working instructions for the bonding systems of other manufacturers.

Recommended procedure for the use of Alloy Primer, Kuraray
Sandblast metal framework with aluminium oxide as described. Use only dry compressed air (with water separator) or a clean brush for cleaning the framework. **Skin contact and contact with moisture, like steam, must be avoided.** Traces of skin oil or moisture may affect the bond strength. Use a little sponge or a brush to apply Alloy Primer and **allow to dry for at least 1 minute.** The information included in the current version of the manufacturer's instructions for use must be observed. Then VITA VM LC PRE OPAQUE or OPAQUE PASTE/OPAQUE are applied.

VITA VM LC PRE OPAQUE – Processing

PRE OPAQUE is a flowable additional component which leads to more reliable bonding of metal frameworks, with and without retentions. Thanks to its translucency, it hardens even in dark zones with a small amount of light.
The use of PRE OPAQUE is particularly recommended for retentions.
The material allows a uniform opaque layer to be obtained.
PRE OPAQUE is applied immediately after drying of the bonding system and the necessary reaction time that follows.

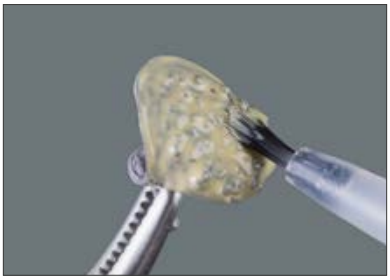
PRE OPAQUE is applied onto the framework with a disposable brush.
Tip: Do not apply to margin areas to avoid the formation of dark zones.
A thin layer is sufficient to fill undercuts adequately.
Polymerize subsequently.
Polymerization information can be found on page 27!

⚠ **Note:** Do not remove the dispersion layer to achieve reliable bonding of PRE OPAQUE and the opaque material. **Avoid skin contact and moisture.**

Either OPAQUE or OPAQUE PASTE must be applied immediately after polymerizing PRE OPAQUE. Both opaque materials have a layer thickness of approx. 0.2 mm each after polymerizing.

⚠ **Note:** Turn back the syringe of the light-sensitive OPAQUE PASTE by at least one turn after dispensing some material and seal it again immediately.

The consistency of OPAQUE PASTE has been adjusted accordingly. OPAQUE LIQUID is exclusively suitable for use with OPAQUE powder and must not be used together with OPAQUE PASTE.



Thin layers of the opaque paste are applied onto the framework using a disposable brush and each layer is polymerized. The first layer is applied in a way to avoid complete coverage – similar to a wash opaque for ceramics.

Polymerization information can be found on page 27!

⚠ **Note on the application of OPAQUE PASTE without PRE OPAQUE:** Frameworks that were heated up after polymerization must be cooled down. OPAQUE PASTE may become liquid and come off the retentions.

Apply as many layers of opaque paste as needed (at least 2) to ensure complete coverage of the metal. Thanks to its visco-elastic consistency, OPAQUE PASTE exhibits high stability at edges and retentions. OPAQUE PASTE on the mixing plate must be protected against light between the individual polymerization steps.

The opaque pastes can be mixed with one another to individualize the shade. Alternatively, PAINT materials can be applied to polymerized OPAQUE PASTE or added.

If non-mixed PAINT materials are applied to OPAQUE PASTE, they are fixed using a hand-held curing light. Then OPAQUE PASTE is cured two times.

Framework completed with VITA VM LC OPAQUE PASTE.

To achieve reliable bonding between opaque paste and dentine, processing should be continued immediately after polymerizing the opaque material or the substructure must be protected against dust and moisture.

⚠ **Note:** After curing, VITA VM LC OPAQUE PASTE must exhibit a lustrous surface with a thin dispersive layer. Avoid contamination with dust and contact with moisture.

For pontics of bridge frameworks with concave design, we recommend leveling them out with adjacent crown frameworks using BASE DENTINE and then curing the material in a final polymerization process. If a layer thickness of 2 mm is reached during layering, final polymerization must be carried out and layering subsequentely continued. Then 2-3 thin layers of OPAQUE PASTE are applied and polymerized.

First add the liquid into the depression of a black ceramic mixing plate. Then add the powder and stir with a plastic spatula for approx. 30 sec. to obtain a homogeneous, thin mixture. Mixing ratio: 5 drops of liquid and 1 measuring spoon of powder (to obtain approx. 4 units). The use of a metal spatula is not recommended since it may result in color changes.

⚠ **Note:** The bottle of the light-sensitive liquid must be sealed immediately after dispensing any liquid. OPAQUE LIQUID is exclusively suitable for use with OPAQUE POWDER and must not be used together with OPAQUE PASTE.

To avoid contamination and premature polymerization of the opaque, the use of a black mixing plate with lid is recommended.

It is recommended to wet the brush with OPAQUE LIQUID before the opaque is applied. To achieve complete polymerization, the opaque is applied in thin layers onto the framework. Polymerization is carried out after each layer. Apply as many layers of opaque paste as needed (at least 2) to ensure complete coverage of the metal. Mixed opaque must be protected against light (dark cover) between the individual polymerization steps.
COLOR OPAQUE materials can be used to individualize the shade.

⚠ **Note:** The opaque layer needs to exhibit a wet-lustrous surface before the polymerization!

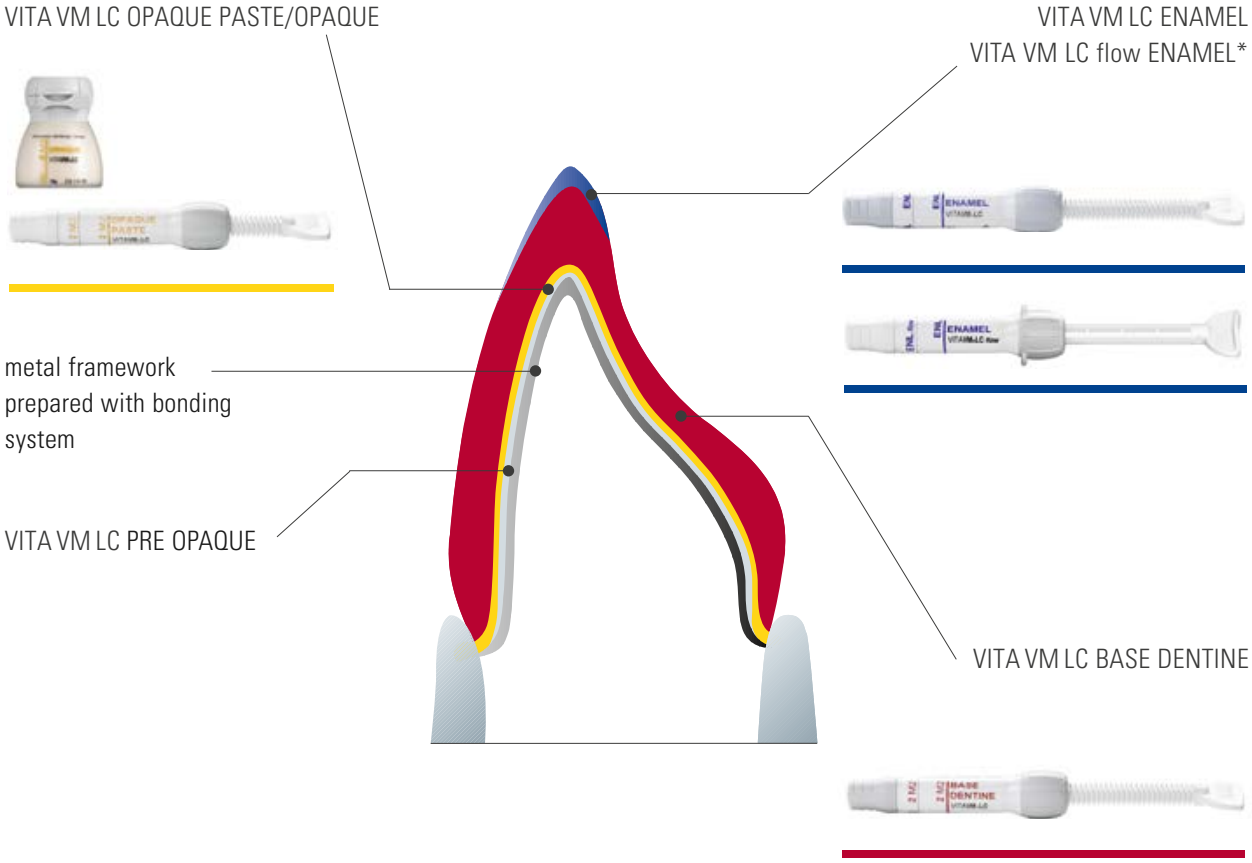
Polymerization information can be found on page 27!

Framework completed with VITA VM LC OPAQUE.

To achieve reliable bonding between opaque and dentine, processing should be continued immediately after polymerizing the opaque material or the substructure must be protected against dust and moisture.

⚠ **Note:** After curing, VITA VM LC OPAQUE POWDER must exhibit a dry and silky matte surface. Avoid contamination with dust and contact with moisture.

For pontics of bridge frameworks with concave design, we recommend leveling them out with adjacent crown frameworks using BASE DENTINE and then curing the material in a final polymerization process. If a layer thickness of 2 mm is reached during layering, final polymerization must be carried out and layering subsequently continued.
Then 2-3 thin layers of OPAQUE are applied and polymerization is carried out.

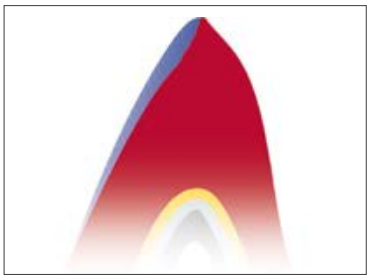


After applying PRE OPAQUE, OPAQUE/OPAQUE PASTE, VITA VM LC BASIC layering consists of the application of BASE DENTINE and ENAMEL/flow ENAMEL.

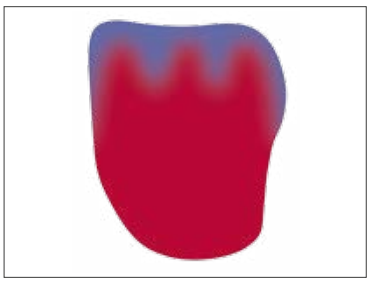
The color-bearing BASE DENTINE materials provide the perfect precondition for the preparation of veneers with intensive shades. With this two-layer alternative, VITA offers an ideal solution for shade reproduction in the case of thin walls.

The user is able to prepare a natural restoration with a lifelike appearance with only two layers.

For perfect shade reproduction, the minimum layer thickness of the veneer, including opaque material, should not be less than 0.8 mm.



Alternative layering in the incisal area, recommended to adapt the VITA VM LC veneer to VITA denture teeth



Basic layering labial view

⚠ **Note:** Compared to VITA VM ceramic layering, ENAMEL and flow ENAMEL are exclusively layered in the incisal area when using VITA VM LC.

* flow ENAMEL materials can be applied more generously than ENAMEL paste materials. This can be attributed to the new filler composition of the VITA VM LC flow materials.

The use of flow CHROMA PLUS materials is recommended for intensifying the cervical area or the basic shade, as well as for layering in cases of limited space.

The PROFESSIONAL KIT and the PAINT KIT are available for individualizing and characterizing VITA VM LC.

VITA VM LC flow materials are used in the incisal area for BASIC layering shown in the picture. Alternatively, layering can be carried out with VITA VM LC paste materials.

A framework prepared for veneering with VITA VM LC OPAQUE PASTE or OPAQUE.

To facilitate layering, separate the plaster on the model using VITA VM LC SEPARATOR. Use a disposable brush to apply VITA VM LC SEPARATOR to the dust-free and dry plaster model to achieve a glossy surface. Leave to dry for 5 minutes.

For very small spaces or chomatic tooth shades, we recommend the use of flow CHROMA PLUS materials.
Application can be carried out cervically or across the entire surface.

Classification tables, see page 28.
Then set by curing briefly.

Polymerization information can be found on page 27!

Layer with BASE DENTINE in a reduced tooth shape. To do so, apply larger amounts of BASE DENTINE. If required, set all veneered surfaces by curing briefly.

The centric, lateral and protrusive occlusion should already be checked in the articulator during this stage.

Alternative:
Perform fully anatomical layering and carry out intermediate polymerization, followed by cut-back using a fine-cut carbide milling tool.
Then clean the veneer surface (brush/pressurized air) and coat with VITA VM LC MODELLING LIQUID.

⚠ **Note:** The VITA VM LC paste materials are adjusted thixotropically. This means that their consistency can be changed – from firmer to softer – by slightly pressing onto them with an instrument. Make sure to avoid inclusion of bubbles.

Supplement the tooth shape using flow ENAMEL and/or flow EFFECT ENAMEL.

Alternatively, the tooth is built up with ENAMEL/EFFECT ENAMEL paste materials.

Classification tables, see page 28.
Then set by curing briefly.

To prevent formation of an inhibition layer and facilitate finishing, we recommend the use of VITA VM LC Gel during final polymerization.

Apply a coat of gel directly from the syringe to cover the entire veneer surface or use an instrument (do not use a brush) to apply the gel.

Perform final polymerization.
Then completely remove VITA VM LC GEL using running water.

⚠ **Information on polymerization:** Prepolymerization units may be used for the fixation of the materials during layering. If a layer thickness of 2 mm is reached during layering, final polymerization must be carried out without the use of VITA VM LC GEL. The layering process is continued immediately afterwards.

Polymerization information can be found on page 27!

Finishing is carried out using fine-cut carbide milling tools (for the maximum speed for composite, refer to the manufacturer's specifications).

Prepolishing using a suitable silicone polisher, for example from the VITA ENAMIC Polishing Set technical, and a small goat-hair brush.

High-gloss polishing using a polishing material for veneering composites and a wool/leather buff or a felt wheel.

Avoid generating excess heat (for the maximum polisher speed, refer to the manufacturer's specifications)

The finalized veneer.

Cleaning

It is recommended to clean under running water using a small amount of cleaning liquid and a soft or medium-hard toothbrush.

Please note the following when cleaning in the ultrasonic unit:
Length of time in the ultrasonic unit: approx. 1 minute
Percentage of alkaline cleaning solution: max. 10%.

> ⚠ **Note:**
> Leaving the restoration in the ultrasonic unit for an excessive length of time may affect the quality of the material.
>
> Steam cleaning results in the development of extreme levels of heat and pressure and should generally be avoided.

Corrections of the shape

- Grinding/or adjustment to the shape during layering after intermediate or final polymerization or
- Adding material after polishing or
- Adding material after polymerization with VITA VM LC GEL

Roughen the surface using a fine-cut carbide milling tool and reduce the shape if required. Then use dry compressed air (with water separator) or a clean dry brush to remove any grinding dust.
The completely dry surface is wetted with VITA VM LC MODELLING LIQUID and VITA VM LC paste or flow materials are added. Polymerize and complete as described.

VITA VM LC flow materials are used for individual layering with shade 2M2 in the incisal area shown in the picture. Alternatively, layering can be carried out with VITA VM LC paste materials.

To facilitate layering, separate the plaster on the model using VITA VM LC SEPARATOR. Use a disposable brush to apply VITA VM LC SEPARATOR to the dust-free and dry plaster model to achieve a glossy surface. Leave to dry for 5 minutes.

Apply flow CHROMA PLUS CP2:
– Cervical
– Mesial/distal ridges

Set by curing briefly.
Polymerization information can be found on page 27!

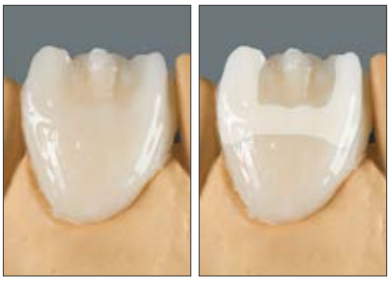
Apply flow CHROMA PLUS CP3 in the central area.
Layer the mamelons using flow CP1 (mesially/distally) and flow CP3 (centrally)

If required, set by curing briefly.

Layer with BASE DENTINE 2M2 in a reduced tooth shape.
To do so, apply larger amounts of BASE DENTINE.
If required, set all veneered surfaces by curing briefly.

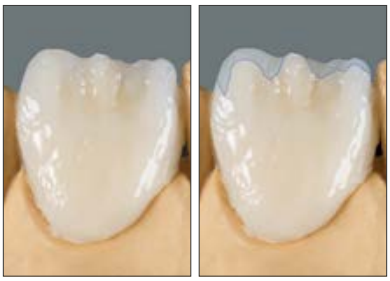
Alternatively, perform fully anatomical layering of BASE DENTINE and carry out intermediate polymerization followed by cut-back using a fine-cut carbide milling tool. Then clean the veneer surface (brush/pressurized air) and coat with VITA VM LC MODELLING LIQUID.

⚠ **Note:** The VITA VM LC paste materials are adjusted thixotropically. This means that their consistency can be changed – from firmer to softer – by slightly pressing onto them with an instrument. Make sure to avoid inclusion of bubbles.



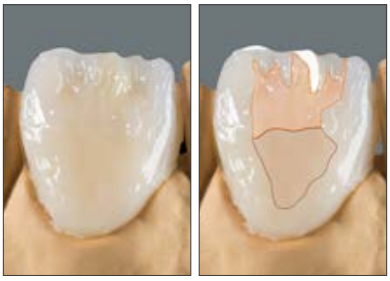
Apply flow ENAMEL ENL distally and mesially in the incisal edge area, as well as centrally in the upper third of the veneering surface.

If required, set by curing briefly.



Layer flow EFFECT ENAMEL EE 9 in the mesial, distal and incisal area.

If required, set by curing briefly.



Layering flow EFFECT ENAMEL
EE1 – incisal
EE5 – upper half
and EE6 – lower half

If required, set by curing briefly.

Completion of the tooth shape using flow WINDOW.

Then set all veneered surfaces by curing briefly.

So that finishing is easier, we recommend the use of VITA VM LC GEL during final polymerization to prevent formation of an inhibition layer.

Apply a coat of gel directly from the syringe to cover the entire veneer surface or use an instrument (do not use a brush) to apply the gel.

Perform final polymerization.

Then completely remove VITA VM LC GEL using running water.

Finishing, polishing, cleaning and shape adjustments, see page 12.

⚠ **Information on polymerization:** Prepolymerization units may be used for the fixation of the materials during layering. If a layer thickness of 2 mm is reached during layering, final polymerization must be carried out without the use of VITA VM LC GEL. The layering process is continued immediately afterwards.

Polymerization information can be found on page 27!

The finalized individual veneer.

To achieve an enhanced esthetic appearance, shade individualization of VITA ENAMIC restorations can be performed using VITA VM LC flow or paste materials (layering technique), particularly in the transparent area of anterior restorations or in the vestibular area of posterior restorations. Esthetically appealing results can be achieved, even with thin layers of VITA VM LC / VITA VM LC flow. The VITA VM LC CREATIVE KIT is available for layering-over.
The cut-back is carried out using CAD software or manually as a preparatory step for individualizing or veneering.
The following minimum layer thicknesses for VITA ENAMIC must be adhered to:

Anterior crowns		**Posterior crowns**	
Incisal:	at least 1.5 mm	Occlusal:	at least 1.0 mm
Circumferential:	at least 0.8 mm	Circumferential:	at least 0.8 mm

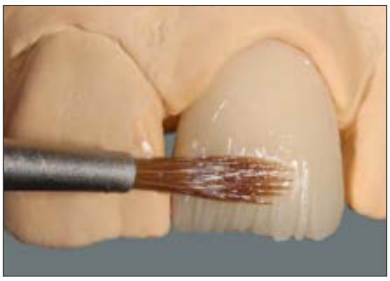
Conditioning the surface

- The surface of the VITA ENAMIC restoration to be individualized must be roughened and oil-free to ensure perfect bonding to the composite.
- Adhesion of residue, such as milling liquid or lubricant (such as Dentatec) to the surface, is not permitted. Remove these either with ethanol or using an ultrasonic bath and dry the restoration.
- The level of surface roughness immediately following CAM processing with a diamond grinding tool is sufficient for individualization.

If subsequent reworking of the surface has reduced the level of roughness, one of the following three alternative methods can be used to increase roughness again:

1. Roughening with a diamond grinding tool or
2. Sandblasting using Al_2O_3 at max. 50 µm and a blasting pressure of max. 1 bar or
3. Extraorally only (!): etching with a 5% hydrofluoric acid gel such as VITA ADIVA CERA-ETCH, as follows:
   using a small disposable brush, apply VITA ADIVA CERA-ETCH to the surfaces to be etched.
   Etching time: 60 seconds. Once the application time has come to an end, completely remove the residual acid from the etched surface by rinsing off with copious amounts of water, by cleaning thoroughly using a steam jet device, or by cleaning in an oil-free ultrasonic bath using distilled water. After cleaning, allow the surface to dry or dry with compressed air (with water separator).
   Do not brush off, as this would lead to significant surface contamination.

- Surfaces sandblasted with Al_2O_3 must also be cleaned thoroughly.
- After cleaning, the surface should no longer be touched.



- Apply silane bonding agent, for example, VITA ADIVA C-Prime, to the roughened surface.
- Apply VITA VM LC MODELLING LIQUID.

Application of VITA VM LC flow or paste materials

Restoration prepared for individualization.

Incorporating incisal translucent effects, with, for example, flow EFFECT ENAMEL EE9 and EE2. If required, set by curing briefly.

Layering mamelons with, for example, flow EFFECT ENAMEL EE2 and EE5. If required, set by curing briefly.

Building up the tooth shape using flow ENAMEL and / or flow EFFECT ENAMEL. Set by curing briefly.

Option: Coating the entire crown with flow WINDOW.

All veneered surfaces are set by curing briefly.

To prevent formation of an inhibition layer and facilitate finishing, we recommend the use of VITA VM LC Gel during final polymerization. Apply a coat of gel directly from the syringe to cover the entire veneer surface or use an instrument (do not use a brush) to apply the gel.

Perform final polymerization.

Then completely remove VITA VM LC GEL using running water.

The restoration is finished and adjusted with a fine diamond instrument (marked with red ring, grit size 27 - 76 µm).

⚠ **Note:** VITA ENAMIC must not be milled with carbide milling tools.

Perform prepolishing using the instruments provided with the VITA ENAMIC Polishing Set technical and a goat-hair brush. A polishing material for veneering composites and a cotton/leather buff or a felt wheel are used for high-gloss polishing.
Avoid generating excess heat (for the maximum polisher speed, refer to the manufacturer's specifications)

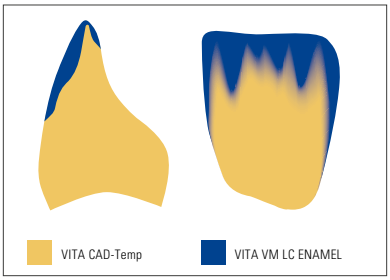
The completed ENAMIC restoration veneered with VITA VM LC flow.

Information on cleaning, see page 12.

To achieve an enhanced esthetic appearance, the shade of long-term temporary restorations made from VITA CAD-Temp can be individualized with VITA VM LC flow or paste materials, especially in the translucent incisal area of anterior restorations, or in the vestibular area of posterior restorations. Even thin layers of VITA VM LC achieve esthetically appealing results. The VITA VM LC CREATIVE KIT is available for layering-over.

When using the cut-back technique, controlled grinding or reducing of border areas using a cross-cut carbide milling tool is the precondition for a smooth transition between the VITA CAD-Temp temporary restoration and VITA VM LC.

To achieve reliable bonding between VITA CAD-Temp and VITA VM LC paste/ VITA VM LC flow, the surface is sandblasted with aluminium oxide (grit size 50 µm) at a pressure of 2 bar.



⚠ **Note:** Maximum reduction of VITA CAD-Temp to achieve sufficient stability of the temporary restoration:
translucent area of temporary anterior restoration: max. 0.5 mm.
Vestibular area of temporary posterior restoration: max. 0.3 mm.

To achieve reliable bonding, the sandblasted surface must be carefully cleaned with dry compressed air (with water separator) or using a dry clean brush and wetted with VITA VM LC MODELLING LIQUID. Allow MODELLING LIQUID to take effect for 30 to 60 seconds.

⚠ **Note:** The liquid must not be used to thin the materials.

Depending on which type of individualization is to be achieved, the suitable shade is applied:
VITA VM LC flow and VITA VM LC PAINT materials are available for this purpose. They can be mixed with one another.
Mixing ratio: at least 2 parts of VITA VM LC flow and no more than 1 part of PAINT. For fixation of the materials, intermediate polymerization is required.

Polymerization information can be found on page 27!

⚠ **Note:** VITA VM LC PAINT must not be on the surface and must be completely coated with dentine, enamel or flow WINDOW materials. When applying the materials, air inclusions must be avoided.

Apply a small quantity of ENAMEL, EFFECT ENAMEL, WINDOW or NEUTRAL in the upper third of the veneer surface (translucent or vestibular area). Intermediate polymerization can be carried out at any time during layering. Then perform final polymerization: To prevent formation of an inhibition layer and facilitate finishing, we recommend the use of VITA VM LC GEL during final polymerization. Apply a coat of gel directly from the syringe to cover the entire veneer surface or use an instrument to apply the gel. Perform final polymerization.
Then completely remove VITA VM LC GEL using running water.

Polymerization information can be found on page 27!

Fine-cut carbide burs must be used for all corrections of contours during individualization.

Polishing
Then prepolishing is carried out using a suitable silicone polisher, for example, from the VITA ENAMIC Polishing Set technical, and a small goat-hair brush. A polishing material for veneering composites and a cotton/leather buff or a felt wheel are used for high-gloss polishing. Avoid generating excessive heat.

⚠ **Note:** Carefully performed polymerization and polishing are important requirements to obtain a good result and avoid the formation of deposits and resulting adverse effects on the shade.

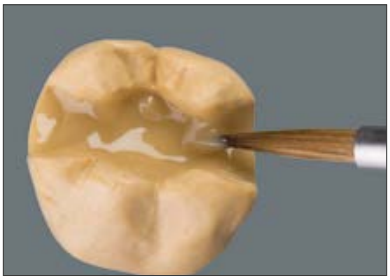
Completed, individualized VITA CAD-Temp temporary bridge on the working model.

Information on cleaning, see page 12.

VITA VM LC flow materials are used for inlay layering in the incisal area shown in the picture. Alternatively, layering can be carried out with VITA VM LC paste materials.
A veneer is built up in the same way as an inlay.
Preparation information about inlay and veneer, see page 4.

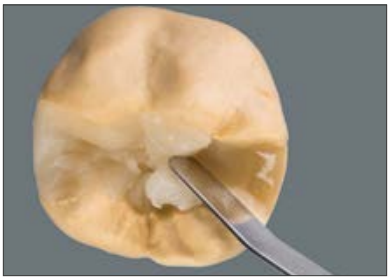
Preparation of the model:
Undercuts should be blocked out first.
Additionally, a thin spacer layer can be applied.

Separating:
The die of the inlay is coated with SEPARATOR beyond the preparation border. Use a disposable brush to apply VITA VM LC SEPARATOR to the dust-free and dry plaster model to achieve a glossy surface. Leave to dry for 5 minutes.
The procedure must be repeated twice.

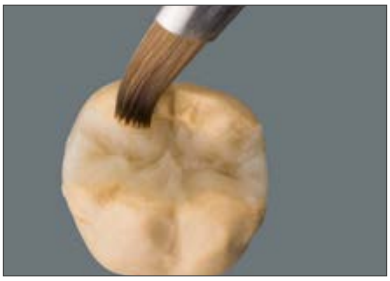


Layering:
The inlay bottom is built up using a VITA VM LC flow material, for example CHROMA PLUS or ENAMEL, that matches the tooth shade. Do not coat the preparation border. Then set by curing briefly.

Polymerization information can be found on page 27!



Then use BASE DENTINE to build up the occlusal surface just below the preparation border. Use a flat brush wetted with MODELLING LIQUID to spread the material up to the border. The occlusal surface can also be built up with VITA VM LC flow materials.
Then set by curing briefly.



For characterization of fissures, mix a suitable VITA VM LC PAINT material with flow WINDOW at a ratio of 1:2, apply into the fissures and set by curing briefly. Fissures can be characterized either with VITA VM LC flow CHROMA PLUS or EFFECT ENAMEL materials.

Build up the inlay to achieve the desired tooth shape using ENAMEL, NEUTRAL or EFFECT ENAMEL materials in paste or flow consistency.
Classification tables, see page 28.

Set by curing briefly.

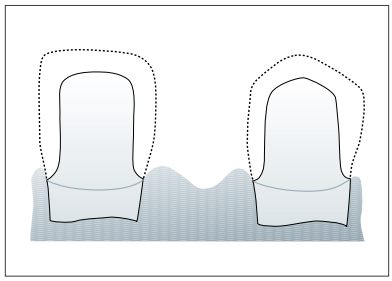
Then apply a thin layer of flow WINDOW to seal the fissures. Set by curing briefly.

Then final polymerization is carried out. So that finishing is easier, we recommend the use of VITA VM LC GEL during final polymerization to prevent formation of an inhibition layer.
Apply a coat of gel directly from the syringe to cover the entire veneer surface or use an instrument (do not use a brush) to apply the gel.
Perform final polymerization.
Then completely remove VITA VM LC GEL using running water.

Finishing and polishing should be carried out on a duplicate die. Prior to the integration, all inner surfaces must be sandblasted with 50–110 µm aluminium oxide while exerting only little pressure.

Completed inlay.

Bonding:
The dual-curing luting composite VITA ADIVA® F-CEM is recommended for bonding.
Please adhere to the working instructions.

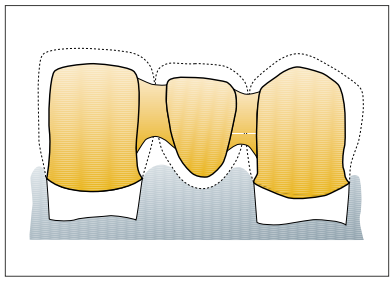


Long-term temporary:
Metal-free crowns and three-unit bridges made from VITA VM LC

Preparation:
A circumferential chamfer is required for adequate material thickness at the preparation margins.

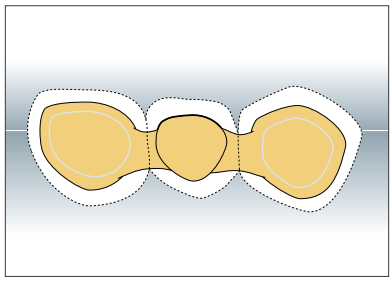
Preparation of the model:
Undercuts should be blocked out first.

Separating:
The die is coated with VITA VM LC SEPARATOR beyond the preparation border. Use a disposable brush to apply VITA VM LC SEPARATOR to the dust-free and dry plaster model to achieve a glossy surface. Leave to dry for 5 minutes.
The procedure must be repeated at least twice.



Use BASE DENTINE to model the copings and the pontic in reduced tooth size. The approximal connections must have a diameter of at least 3.5 mm (10 mm^2).

Polymerization information can be found on page 27!



Build up the labial side of the pontic with BASE DENTINE until the build-up level of the copings of the abutment teeth is reached.

Further layering and completion of the entire bridge should take place in accordance with VITA VM LC BASIC layering (see page 9).

Veneering partially yttrium-stabilized ZrO_2 frameworks (CTE approx. 10,0 - 10,5 · 10^{-6} · K^{-1}), such as VITA YZ SOLUTIONS

Prepare framework for veneering. Sandblast surfaces to be veneered with Al_2O_3 (at least 50 µm) and a pressure of < 2.5 bar and then clean with compressed air (with water separator) or a dry clean brush.

Primer approved for the use for **permanent** and **temporary** restorations: **Clearfil Ceramic Primer Plus, Kuraray**
Primer approved **only for the use of temporary** restorations: **Signum zirconia bond, Heraeus Kulzer**

- Apply **Clearfil Ceramic Primer Plus** in accordance with the manufacturer's instructions.
  To achieve adequate bonding, the next layer is applied immediately afterwards: VITA VM LC PRE OPAQUE and OPAQUE PASTE or, alternatively, directly apply VITA VM LC OPAQUE PASTE (see page 6).

- Apply **Signum zirconia bond I and II** in accordance with the manufacturer's instructions.
  To achieve adequate bonding, the next layer is applied immediately afterwards: VITA VM LC PRE OPAQUE and then VITA VM LC OPAQUE PASTE/ OPAQUE (see page 6).

Further layering and completion of the entire veneer should take place in accordance with VITA VM LC BASIC layering (see page 9).

Veneering frameworks made of polyether ether ketone (PEEK)

The restoration is fabricated and the surfaces are prepared in accordance with the instructions of the corresponding PEEK manufacturer.

- To achieve reliable bonding of VITA VM LC to polyether ether ketone (PEEK) with a filler content of up to 20 %, such as BioHPP/Bredent, and PEEK OPTIMA® LT1 Polymer, such as Juvora, InnoBlanc Medical, visio.link primer (bredent) has been tested and approved by VITA.

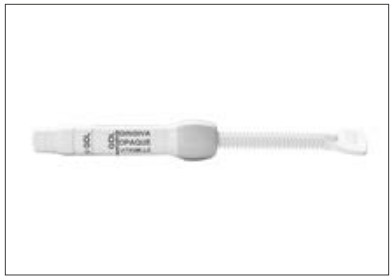
- Subsequent use of the transparent VITA VM LC PRE OPAQUE is recommended; the viscosity of this product ensures uniform coating of the surfaces and reliable curing (see page 6).

- Afterwards, the opaque is applied and the VITA VM LC layering is carried out as described, starting on page 7.

Individualization of VITA acrylic teeth

VITA denture teeth can be adapted to remaining natural teeth by using VITA VM LC materials in paste or flow consistency. Depending on the type of individualization, the following procedure is required:

- A cross-cut carbide bur is used if the tooth shape needs to be reduced.
- If the tooth shape does not need to be reduced, sandblasting is carried out immediately as described in the next step.
- To achieve reliable bonding between VITA VM LC and the VITA acrylic teeth, the respective surfaces need to be sandblasted with aluminium oxide (grit size 50 µm) and a pressure of 2 bar.
- The sandblasted surface must be carefully cleaned with compressed air (with water separator) or a dry clean brush and wetted with VITA VM LC MODELLING LIQUID to achieve reliable bonding.
  Allow MODELLING LIQUID to take effect for 30 to 60 seconds.
- Depending on the type of individualization to be achieved, the appropriate Effect material is applied / used: there are a variety of VITA VM LC flow or paste materials available for this purpose (see page 30).
  To set the materials, cure them briefly.
- To prevent formation of an inhibition layer and facilitate finishing, we recommend the use of VITA VM LC GEL during final polymerization. Apply a coat of gel directly from the syringe to cover the entire veneer surface or use an instrument (do not use a brush) to apply the gel.
- Perform final polymerization and then completely remove VITA VM LC GEL using running water.
- Finishing is done as described on page 12.



Reproduction of gingival components using metal retentions

The VITA VM LC GINGIVA materials were developed especially to restore the original gingival situation. The range of shades of the gingiva materials enables the reproduction of gingiva for patients from all cultural backgrounds. In the case of gingival reproduction with metal retentions, first condition the metal with primer and coat with gingival opaque material (for details of how to apply primer and opaque material, see page 6).

VITA VM LC GINGIVA OPAQUE and GINGIVA OPAQUE PASTE are recommended for covering retentions of partial restorations. Smears are avoided during further processing. Then layer the GINGIVA and/or flow GINGIVA materials. Observe the information on layering, polymerization and finishing. See BASIC layering, page 6.

In the case of thin GINGIVA/flow GINGIVA layers, a mixture of GINGIVA OPAQUE PASTE GOL and PAINT is recommended for the GINGIVA shades G1, G4 and G5. A higher content of GINGIVA OPAQUE PASTE GOL is required in the mixture.

GINGIVA	Mixture of GINGIVA OPAQUE PASTE GOL/PAINT
G1	GOL/PT13*
G4	GOL/PT19*
G5	GOL/PT15*

* Mixing ratio 2:1 (2 parts of GOL, 1 part of PT)
The information given is only intended to provide reference values.

How does light curing work?
Radiation with light of certain wavelengths starts radical polymerization in the opaque or the composite as a result of the photoinitiators contained in them. During this process the short-chain monomers are linked to form a polymer network. At the same time, specially-treated inorganic fillers are integrated into this network. As a result, the previously plastic, mouldable composite is transformed into a hard, insoluble material.

What must be considered during light curing?
The effect of the photoinitiators is only ensured if light with a suitable wavelength and sufficient intensity is used. The maximum layer thicknesses should not be exceeded. To polymerize VITA VM LC, the units must be equipped with lamps emitting light in a wavelength range of 350 nm to 500 nm. There are various light sources which can be used for this purpose: e.g. fluorescent lamps, xenon flashlight lamps, LED lamps and halogen lamps. As with all chemical reactions, polymerization takes place more rapidly at increased temperatures. Fluorescent lamps are less suitable, since their heat emission is minimal. In the polymerization chamber, temperatures of 60-80°C contribute to achieving fast and accurate polymerization. Temperatures above 120 °C must be avoided.

Consequences of insufficient light curing
Insufficient activation by unsuitable or old lamps results in defective networks in the composite. Lack of mechanical stability and poor surface quality lead to premature failure of the restoration. Flaking and secondary discoloration are the consequences. They can be avoided through regular maintenance of the light-curing units by the dental professional.

Photo 1 clearly illustrates the consequences of insufficient light curing: Immersion of the restorations in red wine over eight weeks causes hardly recognizable discolorations in the completely cured restoration (to the left in the photo). The crown that has been polymerized too shortly (i.e. insufficiently cured) (to the right in the photo) reveals strong discolorations.

Photo 1:
to the left: completely polymerized, hardly any discoloration
to the right: polymerized too shortly, strong discolorations

When using light-curing composites, a good polymerization result strongly depends on the power of the unit in use. To be able to provide recommendations, VITA has carried out extensive tests of the most common light curing devices in conjunction with VITA VM®LC.

Polymerization times and information can be found here:

For information on how to properly polymerize VITA VM®LC, visit:
https://www.vita-zahnfabrik.com/de/Verblendmaterial/Verblendkomposite/VITAVMLC-30312,27568.html

The classifications are only intended to provide reference values.

VITA SYSTEM 3D-MASTER	OPAQUE	OPAQUE PASTE	flow CHROMA PLUS**	ENAMEL
0M1	OP 0M1	–	–	ENL
1M1	OP 1M1	OP 1M1	CP1/CP2*	ENL
1M2	OP 1M2	OP 1M2	CP2	ENL
2L1.5	OP 2L1.5	OP 2L1.5	CP2	ENL
2L2.5	OP 2L2.5	–	CP2	ENL
2M1	OP 2M1	OP 2M1	CP2	ENL
2M2	OP 2M2	OP 2M2	CP1/CP3*	ENL
2M3	OP 2M3	OP 2M3	CP3	ENL
2R1.5	OP 2R1.5	–	CP1/CP5*	ENL
2R2.5	OP 2R2.5	–	CP1/CP3*	ENL
3L1.5	OP 3L1.5	OP 3L1.5	CP2/CP5*	ENL
3L2.5	OP 3L2.5	–	CP3	ENL
3M1	OP 3M1	–	CP1/CP5*	ENL
3M2	OP 3M2	OP 3M2	CP3/CP5*	ENL
3M3	OP 3M3	OP 3M3	CP3/CP4*	ENL
3R1.5	OP 3R1.5	–	CP4/CP5*	ENL
3R2.5	OP 3R2.5	OP 3R2.5	CP4/CP5*	ENL
4L1.5	OP 4L1.5	–	CP5	END
4L2.5	OP 4L2.5	–	CP4/CP5*	END
4M1	OP 4M1	–	CP5	END
4M2	OP 4M2	OP 4M2	CP3/CP5*	END
4M3	OP 4M3	–	CP4/CP5*	END
4R1.5	OP 4R1.5	–	CP5	END
4R2.5	OP 4R2.5	–	CP4	END
5M1	OP 5M1	–	–	END
5M2	OP 5M2	–	–	END
5M3	OP 5M3	–	–	END

VITA classical A1–D4 shades	OPAQUE	OPAQUE PASTE	flow CHROMA PLUS**	ENAMEL
A1	OP A1	OP A1	CP1	ENL
A2	OP A2	OP A2	CP2	ENL
A3	OP A3	OP A3	CP2/CP3*	ENL
A3.5	OP A3.5	OP A3.5	CP3	END
A4	–	OP A4	CP4/CP5*	END
B2	–	OP B2	CP2	ENL
B3	OP B3	OP B3	CP2/CP3*	END
B4	–	OP B4	CP3	END
C1	–	OP C1	CP1/CP5*	END
C2	–	OP C2	CP1/CP5*	ENL
C3	–	OP C3	CP1/CP5*	END
C4	–	OP C4	CP5	END
D2	–	OP D2	CP2	END
D3	OP D3	OP D3	CP2/CP5*	END
D4	–	OP D4	CP2/CP5*	END

*Mixing ratio approx. 1:1
When mixing flow CHROMA PLUS materials, ensure that air bubbles are not created.

VITA**VM®LC opaque materials**

PRE OPAQUE – first opaque layer for metal, PEEK and zirconia frameworks – particularly recommended for retentions – flowable transparent material that ensures reliable curing – allows a uniform opaque layer to be obtained		PRE	transparent	
OPAQUE PASTE – tooth-colored opaque paste to mask the shade of the framework – high masking capacity for thin layers (approx. 0.2 mm) – high stability, thanks to the homogeneous visco-elastic consistency – also for retentions		1M1 1M2 2L1.5 2M1 2M2 2M3 3L1.5 3M2 3M3 3R2.5 4M2 A1–D4 (except of B1)		
OPAQUE powder – tooth-colored opaque powder to mask the shade of the framework – high masking capacity for thin layers (approx. 0.2 mm)		0M1 1M1 - 5M3 A1 A2 A3.5 B3 D3		
COLOR OPAQUE powder – shade-intensive opaque powder materials for characterization, especially in cases with thin walls – not suitable for use with OPAQUE PASTE		CO1 CO2 CO3	orange brown lilac	
GINGIVA OPAQUE PASTE/ **GINGIVA OPAQUE powder** – for coating the metal framework prior to the application of the GINGIVA materials – for retentions on CoCr structures, no smears		GOL	light pink	

VITA**VM®LC veneering materials**

	flow*	paste				
BASE DENTINE – shade-defining BASE DENTINE materials	–	x		0M1, 1M1-5M3		
	–	x		A1–D4 (except of B1)		
ENAMEL – translucent enamel materials	x	x		ENL	light	
	x	x		END	dark	
NEUTRAL – universal translucent material	x	x		NT	Translucent	
WINDOW – transparent material, for crystal-clear effects in the enamel area – for mixing and layering of VITA VM LC PAINT stains on VITA VM LC, VITA acrylic teeth and VITA CAD-Temp – for mixing the VITA VM LC flow materials – for coating the finalized veneer – for covering fissures	x	–		WIN	transparent	
EFFECT ENAMEL – translucent enamel effect material for all enamel areas – for achieving a natural effect of depth	x	–		EE1	whitish	
	x	x		EE2	pastel	
	–	x		EE3	pink-translucent	
	x	–		EE5	yellowish-translucent	
	x	x		EE6	reddish-translucent	
	x	–		EE7	orange-translucent	
	x	x		EE9	bluish-translucent	
	x	–		EE11	greyish-translucent	
	x	x		EE12	grey-beige	
CHROMA PLUS (flow & paste) – shade-intensive materials; the intensity can be controlled through the thickness of the layer – to be applied in the tooth-neck area or across the entire surface of the opaque **CHROMA PLUS (flow)** – stronger fluorescent effect – can also be used as a correction material, depending on the shade	x	x		CP1	ivory	
	x	x		CP2	beige-yellow	
	x	x		CP3	light orange-brown	
	x	x		CP4	orange	
	x	x		CP5	green-brown	

	flow*	paste				
GINGIVA – for restoring the original gingival situation ** when a layer thickness of 1 mm is reached, final polymerization is required	x	x		G1	dusky pink	
	x	x		G2	orange-pink	
	x	–		G3	pink	
	x	x		G4	brown-red	
	x	x		G5**	dark red	

stains

PAINT – flowable materials for shade effects and individual characteristics, such as calcification, enamel cracks and nicotine stains – PAINT materials should not lie on the surface, due to the low filler content – for individualizing OPAQUE PASTE – can be mixed with all VITA VM LC flow materials Mixing ratio: at least 2 parts of VITA VM LC flow and no more than 1 part of PAINT.		PT1	white	
		PT3	yellow	
		PT5	light orange-brown	
		PT8	almond-colored	
		PT9	green-brown	
		PT12	bordeaux	
		PT13	grey	
		PT15	chestnut brown	
		PT17	blue	
		PT19	light brown	

*** The VITA VM LC flow materials can be mixed with one another and can be shaded by combining with VITA VM LC PAINT materials.**
Mixing ratio: at least 2 parts of VITA VM LC flow and no more than 1 part of PAINT.
In order to prevent bubbles during mixing, an instrument should be used for mixing rather than a brush.

Various levels of translucency – VITA VM LC flow

From left to right:
CHROMA PLUS CP2, EFFECT ENAMEL EE2, ENAMEL LIGHT ENL, WINDOW WIN.
Thickest point (top): 2.0 mm,
thinnest point (bottom): 0.5 mm.

VITA VM LC OPAQUE LIQUID
Mixing liquid for OPAQUE powder.
OPAQUE LIQUID must not be used together with OPAQUE PASTE material.

5 ml, Prod. No. CVMLOL5

VITA VM LC SEPARATOR
Liquid for separating plaster models against resin.
Application: Use a disposable brush to apply VITA VM LC SEPARATOR to the dust-free and dry plaster model to achieve a glossy surface. Leave to dry for 5 minutes.

30 ml, Prod. No. CVMLS30

VITA VM LC MODELLING LIQUID
Application is easier if the modelling instrument or the brush is wetted with a very small quantity of liquid. Use very sparingly. The liquid must not be used to thin the powders.
To be used for wetting the veneering materials after adjustments made by grinding. Ensures bonding of VITA VM LC, and for example, VITA acrylic teeth and VITA CAD-Temp.

10 ml, Prod. No. CVMLM10
30 ml, Prod. No. CVMLM30

VITA VM LC CLEANER
Cleaning liquid should be used to remove non-polymerized VITA VM LC materials from instruments.
Hardened material residues can be partially dissolved with VITA VM LC OPAQUE LIQUID.

50 ml, Prod. No. CVMLC50

VITA VM LC GEL
To prevent formation of an inhibition layer during final polymerization and to facilitate finishing.

20 ml, Prod. No. CVMLG20

VITA ADIVA C-PRIME
Single-component silane bonding agent.

Bottle cont. 5 ml, Prod. No. FACP5

VITA porcelain mixing plate
For light-curing materials
black, 8.5 x 11 cm

Prod. No. C014

VITA CERAMICS ETCH (for extraoral use only!)
Hydrofluoric acid gel, 5%, for etching silicate ceramics, red colored.

Syringe of 3 ml, Prod. No. FACE3
Bottle cont. 6 ml, Prod. No. FACE6

VITA**VM®LC BASIC KIT**
Basic kits for BASIC layering

- available in VITA SYSTEM 3D-MASTER shades as complete kit with 26 shades, also available as BASIC KIT SMALL with 11 shades (1M1, 1M2, 2L1.5, 2M1, 2M2, 2M3, 3L1.5, 3M2, 3M3, 3R2.5, 4M2)
- available in VITA classical A-D shades as complete kit with 15 shades (without B1), also available as BASIC KIT SMALL with 6 shades: (A1, A2, A3, A3.5, B3, D3)
- choice between paste or flow incisal materials

VITA**VM®LC PROFESSIONAL KIT**
For natural effects and characteristics

VITA**VM®LC PAINT KIT**
Shade-intensive materials for staining

VITA**VM®LC GINGIVA KIT**
Gingiva materials with natural effects for the reproduction of gingival areas

Compositions

VITA VM LC flow materials
(GINGIVA, WINDOW, NEUTRAL, ENAMEL, CHROMA PLUS, EFFECT ENAMEL)
Dimethacrylates, multifunctional acrylates, catalysts, stabilizers and inorganic pigments.
Filler content: 55 - 68 % by weight, zirconia, silicon dioxide.

VITA VM LC paste materials
(BASE DENTINE, ENAMEL, EFFECT ENAMEL, NEUTRAL, GINGIVA)
Dimethacrylates, copolymer, catalyst, stabilizers and inorganic pigments.
Filler content: 41 - 52 % by weight, silicon dioxide.

VITA VM LC paste materials CP
(CHROMA PLUS)
Dimethacrylates, copolymer, catalyst, stabilizers and inorganic pigments.
Filler content: 38 - 55 % by weight, silicon dioxide, feldspar.

VITA VM LC PRE OPAQUE
Dimethacrylates, multifunctional acrylates, catalyst and stabilizers.

VITA VM LC opaque paste
(OPAQUE PASTE, GINGIVA OPAQUE PASTE)
Dimethacrylates, multifunctional acrylates, catalysts, stabilizers and inorganic pigments.
Filler content: 4 - 9 % by weight, silicon dioxide

VITA VM LC opaque powder
(OPAQUE, GINGIVA OPAQUE, COLOR OPAQUE)
Polymethyl methacrylate and inorganic pigments.

VITA VM LC PAINT KIT
Dimethacrylates, catalyst, stabilizers and inorganic pigments.
Filler content: 30 - 40 % by weight

VITA VM LC GEL
Glycerin and silicon dioxide.

VITA VM LC MODELLING LIQUID
Dimethacrylate, methacrylic ester, catalyst and stabilizers.

VITA VM LC CLEANER
Ethanol.

VITA VM LC OPAQUE LIQUID
Dimethacrylates, methyl methacrylate, catalyst and stabilizers.

VITA VM LC SEPARATOR
Polydimethyl siloxane, solvent, silane, catalyst and stabilizers.

VITA**VM®LC – Physical properties**

Product	Flexural strength MPa*	E-modulus MPa
VITA VM LC EN	approx. 110	approx. 4500
VITA VM LC BD	approx. 90	approx. 4000
VITA VM LC flow	approx. 130	approx. 7000

* Measured acc. to DIN EN ISO 10477

Safety at work, health protection, environmental protection	When working with the product, wear suitable safety goggles/ face protection, gloves and safety clothing. Work under an extraction unit. Avoid contact with skin. In case of contact with eyes, rinse immediately with water and seek medical advice. In case of contact with skin, rinse immediately with copious amount of water. Substances hazardous to water must not be allowed to enter the sewage system/to reach the environment.	

Storage information
Do not store above 25°C/77°F.
Do not expose to direct sunlight.

It is generally recommended to store composites under cold conditions.
To ensure optimal storage of the composites in syringes, they should be stored in the firmly sealed container/syringe in a suitable refrigerator at 5–10 °C.
To achieve proper consistency of the materials for processing, they should be kept at room temperature for about one hour.
The containers should not be opened before use! Close the syringe immediately after dispensing material.

Explanation of the markings on the packaging

LOT Symbol for "batch number"

Symbol for "can be used until"

Important! Observe warnings and precautions given in the accompanying documents.

Do not store above 25°C/77°F.


Do not expose to direct sunlight.

Care instructions for removable restorations made from VITA VM LC

- The restoration should be rinsed with water after each meal and cleaned mechanically at least once a day.
- Mechanical cleaning: hold the denture over a washbasin filled with water and clean from all sides.
- Use **a soft or medium-hard toothbrush or denture brush** and **a small quantity of abrasive toothpaste for cleaning.**
- Frequent consumption of coffee, tea, nicotine and, in some cases, medication may cause discoloration. In such cases the restoration should be cleaned repeatedly.
- **It is strongly advised not to use cleaning tabs or cleaning solutions.** The active substances damage the material surfaces and cause discoloration and plaque deposits.

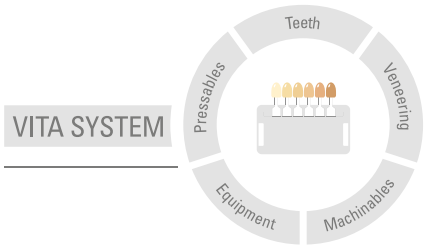
The following products require hazard identification:		
VITA**VM®LC MODELLING** (Contains triethylene glycol dimethacrylate, 2-dimethylaminoethyl methacrylate)	Causes skin irritation. Causes severe eye irritation. May cause respiratory irritation. May cause allergic skin reactions.	
VITA**VM®LC SEPARATOR** (contains cyclohexane, toluene, methyltriacetoxysilane)	Highly flammable liquid and vapor. Possible risk of harm to the unborn child. Prolonged or repeated exposure may cause damage to organs. May be fatal if swallowed and enters airways. Causes severe damage to eyes. Very toxic to aquatic organisms with long-term adverse effects. Causes skin irritation. May cause drowsiness and dizziness.	
VITA**VM®LC CLEANER** (Contains ethanol)	Highly flammable liquid and vapor. Causes severe eye irritation.	
VITA**VM®LC OPAQUE LIQUID** (contains methyl methacrylate, ethylene glycol dimethacrylate, 2-dimethylaminoethyl methacrylate)	Highly flammable liquid and vapor. Causes skin irritation. May cause allergic skin reactions. May cause respiratory irritation.	
VITA**VM®LC OPAQUE PASTE** VITA**VM®LC GINGIVA OPAQUE PASTE** (contains 2-dimethylaminoethyl methacrylate)	Causes skin irritation. Causes severe eye irritation. May cause allergic skin reactions. Harmful to aquatic organisms with long-term adverse effects.	
VITA**VM®LC BASE DENTINE, ENAMEL, EFFECT ENAMEL, NEUTRAL, GINGIVA** (contains 2-dimethylaminoethyl methacrylate, triethylene glycol dimethacrylate)	Causes skin irritation. Causes severe eye irritation. May cause allergic reactions.	

The following products require hazard identification:		
VITA**VM®LC PAINT** (contains 2-dimethylaminoethyl methacrylate, triethylene glycol dimethacrylate)	Causes skin irritation. Causes severe eye irritation. May cause allergic reactions. Harmful to aquatic organisms with long-term adverse effects.	
VITA**VM®LC CHROMA PLUS** (Contains triethylene glycol dimethacrylate, 2-dimethylaminoethyl methacrylate)	May cause allergic reactions. Harmful to aquatic organisms with long-term adverse effects.	
VITA**VM®LC *flow*** (Contains triethylene glycol dimethacrylate, 2-dimethylaminoethyl methacrylate)	Causes skin irritation. Causes severe eye irritation. May cause allergic skin reactions. Harmful to aquatic organisms with long-term adverse effects.	
VITA ADIVA® CERA-ETCH **(hydrofluoric acid ceramic etching gel)** For extraoral use only! Contains hydrofluoric acid.	**Caustic / Toxic** For extraoral use only! Contains hydrofluoric acid. Toxic if swallowed. Fatal in contact with skin. Causes severe skin burns and damage to eyes. Harmful by inhalation. Wear protective gloves/protective clothing/safety goggles. Keep locked up. If swallowed, call Toxicological Information Center immediately and provide safety data sheet. In case of contact with clothing/skin, remove contaminated clothing immediately and rinse with copious amount of water. Specific measures, see safety data sheet. In case of contact with eyes, rinse with water for a few minutes and consult a doctor/Toxicological Information Center. This material and its container must be disposed of as hazardous waste.	 
VITA ADIVA® C-PRIME **(Silane bonding agent)**	Highly flammable liquid and vapor. Keep away from heat/sparks/open flame/hot surfaces. No smoking.	
VITA**VM®LC PRE OPAQUE** (contains 2-dimethylaminoethyl methacrylate)	Harmful to aquatic organisms with long-term adverse effects. May cause allergic reactions.	

Disposal: Proper disposal must be ensured. Disposal in accordance with the regulations of the authorities.

The corresponding safety data sheets can be downloaded at www.vita-zahnfabrik.com/sds.

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: 08.18

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:

VITA**VM®LC** · VITA**VM®LC *flow*** · **VITA CAD-Temp®** · VITA**VM®CC** · **VITA ENAMIC®** · **VITA YZ®** T · **VITA YZ®** HT · **VITA YZ®** ST · **VITA YZ®** XT

The availability of recommended products may vary in some countries.

We would like to thank Mr. Jürgen Freitag (MDT) for his kind support and for providing the photos on pages 15-17 and Mr. Kurt Reichel (MDT) for his kind support and for providing the photos on pages 18-20.

VITA

VITA Zahnfabrik H. Rauter GmbH & Co.KG
Spitalgasse 3 · D-79713 Bad Säckingen · Germany
Tel. +49(0)7761/562-0 · Fax +49(0)7761/562-299
Hotline: Tel. +49(0)7761/562-222 · Fax +49(0)7761/562-446
www.vita-zahnfabrik.com · info@vita-zahnfabrik.com
facebook.com/vita.zahnfabrik

1200E – 0818 (X.X) S – Version (06)