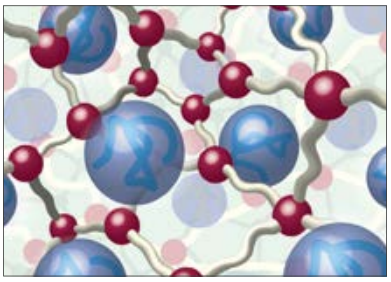
VITA CAD-Temp®

Instructions for use

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

VITA – perfect match.

Composite material made from acrylate polymer
for the fabrication of long-term temporary restorations



PMMA pearls, swollen by monomer

cross-linked monomer

inorganic microparticle filler material polymerized into the polymer network

VITA CAD-Temp monoColor and VITA CAD-Temp multiColor consist of a unique fiber-free, homogeneous, high-molecular and cross-linked acrylate polymer with microparticle filler, or MRP material.
With the MRP material (Microfiller Reinforced Polyacrylic) developed by VITA, inorganic microfillers are polymerized into the network, and a homogeneous material with high abrasion resistance is created using the VITA pressing process.

Physical properties

Properties	Unit	Value*
Flexural strength	MPa (Nmm^{-2})	>80
Modulus	MPa (Nmm^{-2})	approx. 2800
Softening temperature (DSC)	°C	approx. 118
Inorganic filler content	Wt%	approx. 14
Water absorption	complies with EN ISO 10477 Polymer-based crown and bridge materials	
Solubility	complies with EN ISO 10477 Polymer-based crown and bridge materials	
Shade stability	complies with EN ISO 22112 Artificial teeth for dental prostheses	

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

Patient target group

No restrictions

Intended user

Dental professionals only: dentist and dental technician (Rx only).

Indication and processing requirements

VITA CAD-Temp is used for the fabrication of multi-unit, fully or partially anatomical long-term temporary bridge restorations with a span of up to two pontics and a clinical wearing period of up to one year. For CAD/CAM system requirements, please refer to the information provided by the manufacturer of the respective system.

Indication	Anterior crown	Posterior crown	Anterior bridges*	Posterior bridges*
VITA CAD-Temp	●	●	●	●

● recommended * Only terminal bridges are recommended for wearing periods of more than six months.

Contraindication

Permanent restorations with a clinical wearing period of more than one year.
In patients who are allergic to PMMA.

Intended purpose

VITA CAD-Temp products are polymer-based temporary crown and bridge materials for dental treatments.

The shade concept

Materials with a single color (monoColor) or four color layers (multiColor) are available.

CAD-Temp monoColor	**0M1T***	**1M2T**	**2M2T**	**3M2T**
CAD-Temp multiColor		**1M2T**	**2M2T**	**3M2T**

* For the reproduction of bleached teeth (only available in size CT-40)

Preparation guidelines

Since VITA CAD-Temp restorations normally provide the basis for definitive all-ceramic restorations, the standard guidelines for the preparation of all-ceramic restorations must be observed. For detailed information, see the brochure "Clinical Aspects of All-Ceramics," No. 1696.

Provisional full arch restoration for a young patient with dentinogenesis imperfecta by means of VITA CAD-Temp crowns for esthetic and functional rehabilitation and correction of the vertical dimension of occlusion.

Clinical treatment: Prof. Dr. D. Edelhoff, University of Munich.
Laboratory fabrication: J. Schweiger (MDT), University of Munich.

Benefits

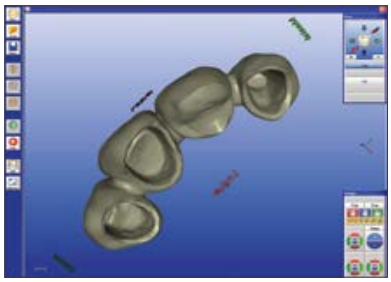
- The material is suitable for restorations with a clinical wearing period of up to one year.
- Homogeneous material due to industrial manufacturing process
- Well-balanced combination of mechanical properties, such as tensile strength and elasticity, for clinical use and the specific indication.
- Excellent abrasion resistance (see literature).
- Translucency and fluorescence based on natural dentition.
- Radiopaque
- Good polishing characteristics.
- Can be individualized with the light-curing VITA VM LC and VITA VM LC flow microparticle composite.
- Can be characterized with shades using VITA AKZENT LC

four-unit temporary anterior bridge, individualized with VITA VM LC

Functions of temporary restorations made from VITA CAD-Temp

- Prophylactic functions:
  - avoiding the movement of abutment teeth
  - protecting the tooth substance against bacterial, toxic and thermal effects
- Diagnostic and esthetic functions:
  - checking occlusion
  - checking phonetics
  - checking the vertical dimension
  - checking the esthetic result
- Therapeutic functions:
  - gingival forming for controlled papillary growth for later implementation in all-ceramic restorations
  - restoring implants during the healing phase

⚠ **Note:**
*For **VITA CAD-Temp multiColor**, please use software specially designed for this purpose, which enables the restoration to be positioned vertically in the block or in the disc, so that the desired layering pattern is achieved.*



⚠ **Note:**
The following geometries or minimum wall thicknesses must be adhered to:

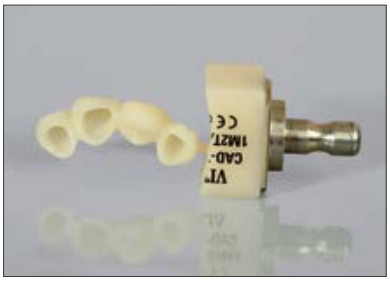
Connector areas:

Anterior bridges
with one pontic 12 mm²
with two pontics 12 mm²

Posterior bridges
with one pontic 12 mm²
with two pontics 16 mm²

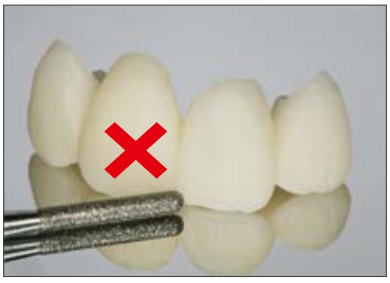
Minimum wall thickness
occlusal: 1.5 mm in the central fissure
circumferential: 0.8 mm

General rule: stability and function should be given priority over esthetics.



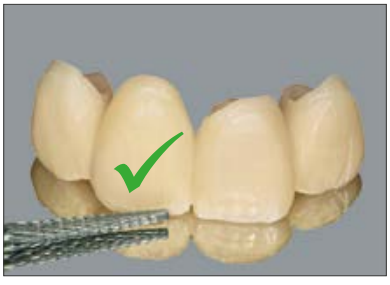
Once the grinding / milling process has been completed (CAM), remove the lug using a fine-cut tungsten carbide bur.

If white spots caused by the diamond tools can be seen on the surface after milling, these spots can be easily removed with a tungsten carbide bur without affecting the quality of the product.



⚠ **Note:**
Generally, fine-cut tungsten carbide tools are better suited for processing polymer materials than diamond grinding tools.

For information about recommended milling tools for milling machines, see page 13.



Checking the occlusion / articulation

CAD-Temp long-term temporary restoration on the working model.

Restorations made from VITA CAD-Temp can be prepolished with a suitable silicone polisher and a small goat-hair brush. High-gloss polishing is done using commercially available acrylic polishing agents such as VITA Polish Hybrid

Avoid generating excessive heat.

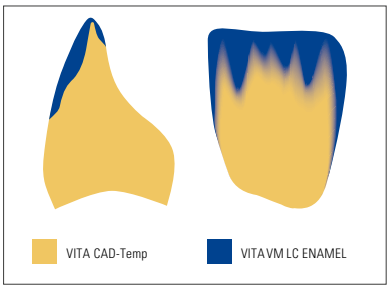
⚠ **Important:**
Careful polishing is absolutely necessary to achieve an ideal result and avoid accumulation of plaque and the related adverse effects on the shade.

Completed temporary bridge restoration on the working model.

To achieve an enhanced esthetic appearance, the shade of long-term temporary restorations made from VITA CAD-Temp can be individualized with the light-curing microparticle composite VITA VM LC flow or paste, especially in the translucent incisal area of anterior restorations, or in the vestibular area of posterior restorations. Excellent results can be achieved, even with thin layers of VITA VM LC.
The VITA VM LC CREATIVE KIT flow Edition, Prod. No. CVLCFCK, is available for individualization. Please observe the information in the Working Instructions VITA VM LC, No. 1200E.

When using the cut-back technique, controlled grinding or reducing of border areas using a cross-cut carbide bur is the precondition for a smooth transition between the VITA CAD-Temp temporary restoration and the light-curing micro-particle composite 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.



⚠ **Important:**

Maximum reduction of VITA CAD-Temp to ensure sufficient stability of the VITA VM LC temporary restoration:

Incisal area of temporary anterior restorations: max. 0.5 mm.

Vestibular area of posterior temporary restoration: max. 0.3 mm.

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 max. 60 seconds.
Layering over is easier if the shaping instrument is moistened with a small quantity of VITA VM LC MODELLING LIQUID. Use sparingly.

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

VITA VM LC Modelling Liquid is a hazardous material.
Relevant information can be found on page 15.

Characterizing the shade with VITA AKZENT LC
Depending on which type of individualization is to be achieved, the suitable shade is applied: Fourteen different VITA AKZENT LC EFFECT STAINS are available for this purpose.

For information on polymerization and polymerization times, refer to the Working Instructions for VITA AKZENT LC, No. 10613.

VITA AKZENT LC

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 on polymerization and a list of suitable polymerization units can be found in the Working Instructions for VITA VM LC (No. 1200).

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 composites, such as VITA Polish Hybrid, and a cotton/leather buff or a felt wheel are used for high-gloss polishing. Avoid generating excessive heat.

☞ **Note:**
Careful polymerization and polishing are essential requirements to obtain an ideal result and avoid the formation of deposits and resulting adverse effects on the shade.

VITA Polish Hybrid
Diamond polishing paste for extraoral and final high-gloss polishing of restorations made of composite, polymer and hybrid ceramic.

Leaving the completed restoration in the ultrasonic unit over an extended period may affect the quality of the material or bonding of VITA VM LC to VITA CAD-Temp.

We recommend limiting the time to approx. one minute.

Content of the alkaline cleaning solution: max. 10%
Temperature: max. 40°C.

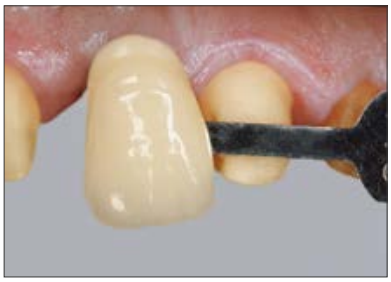
☞ **Note:**
Cleaning with steam results in heat and compressive stress and must generally be avoided.

Completed VITA CAD-Temp monoColor temporary bridge individualized with VITA VM LC / VITA VM LC flow on the working model.

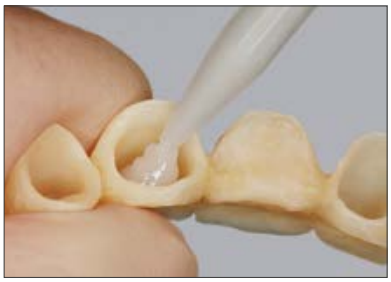
VMK bridge 12-22 prior to the fabrication of the restoration.

Preparation after removal of the VMK bridge.

Digital shade measurement with VITA Easyshade.



Shade taking with shade tabs of the VITA SYSTEM 3D-MASTER Toothguide.



Bonding
With temporary cements / bonding materials such as VITA ADIVA TE-CEM. Translucent materials achieve improved esthetics. If the definitive restoration is to be cemented adhesively, eugenol-free cementing materials must be used. Please observe the processing instructions and indications of the respective manufacturers.

Regular checkups and recalls are required for long-term temporary restorations (period of wearing of more than four weeks), in order to cement the restoration again, if necessary.

Pretreatment of VITA CAD-Temp restorations prior to bonding
Sandblast the inner surfaces of the restoration with Al_2O_3 (50-100 µm, pressure of 1–2 bar) or roughen with a coarse diamond bur.

Temporary restoration being seated.

Removal of excess material.

Temporary bridge made from VITA CAD-Temp monoColor on teeth 12-22.

The final result is esthetically pleasing.

Recommended materials

- Texture marker, (SW-Dental)
- Veneering material (C&B material) for individualization:
  VITA VM LC CREATIVE KIT flow Edition, VITA Prod. No. CVLCFCK
- Stains for characterizing the shade: VITA AKZENT LC
- Fine and coarse cross-cut carbide burs for manual adjustments
- Polishing materials
  such as VITA Polish Hybrid
  Prisma Gloss (Dentsply)
  Dia Glace (Yeti)
- Materials to be used for bonding temporary acrylate-based materials,
  such as VITA ADIVA TE-CEM.

⚠ **Note:**
Please observe the instructions for use and indications of the manufacturers of the products mentioned.

Recommended tools for the milling machine

- The correct tool is essential for achieving high quality and economically optimized final results. Diamond-coated solid carbide milling tools, preferably spherically-shaped ones, are ideal for machining VITA CAD-Temp.

Recommendation:

- For processing VITA CAD-Temp, the same tools can be used as for processing presintered zirconia.

⚠ **Note:**
The standard milling tools for PMMA are mostly uncoated solid carbide milling tools and therefore ***not suitable*** *for processing VITA CAD-Temp,* ***since this material contains fillers (composite).***

Uncoated milling tools will become blunt after a few restorations and can no longer be used. A blunt tool produces more friction heat, which melts the polymer and clogs the milling tool. Fracture of milling tools and defective restorations will result.

	Designation	Size Pieces per pack	Shades	Standard pack	Large pack	Special features
VITA CAD-Temp monoColor	CT-40	15.5 x 19 x 39 mm 2/10 pieces	0M1T	EC40M1TCT402	EC40M1TCT4010	Holder
			1M2T	EC41M2TCT402	EC41M2TCT4010	Holder
			2M2T	EC42M2TCT402	EC42M2TCT4010	Holder
			3M2T	EC43M2TCT402	EC43M2TCT4010	Holder
	CT-55	15.5 x 19 x 55 mm 1 unit	1M2T	EC41M2TCT551	–	Holder
			2M2T	EC42M2TCT551	–	Holder
			3M2T	EC43M2TCT551	–	Holder
	CT-DISC	Ø 98.4 x 20 mm 1 unit	1M2T	EC1M2TD98201	–	circumferential groove
			2M2T	EC2M2TD98201	–	circumferential groove
			3M2T	EC3M2TD98201	–	circumferential groove
VITA CAD-Temp multiColor	CTM-40	15.5 x 19 x 39 mm 2/10 pieces	1M2T	EC41M2TM402	EC41M2TM4010	Holder
			2M2T	EC42M2TM402	EC42M2TM4010	Holder
			3M2T	EC43M2TM402	EC43M2TM4010	Holder
	CTM-85/40	18 x 40 x 85 mm 1 unit	1M2T	EC41M2TM85401	–	Holder
			2M2T	EC42M2TM85401	–	Holder
			3M2T	EC43M2TM85401	–	Holder
	CTM-DISC	Ø 98.4 x 18 mm 1 unit	1M2T	EC1M2TMD98181	–	circumferential groove
			2M2T	EC2M2TMD98181	–	circumferential groove
			3M2T	EC3M2TMD98181	–	circumferential groove

VITA**VM**®**LC CREATIVE KIT flow Edition**
Prod. No. CVLCFCK
For layering over CAD-Temp and for individualizing VITA acrylic teeth.

Quantity	Content	Material
4	2 g	VITA VM LC PAINT PT1, PT5, PT15, PT17
1	3 g	VITA VM LC flow WINDOW WIN
2	3 g	VITA VM LC flow EFFECT ENAMEL EE6, EE9
1	4 g	VITA VM LC flow NEUTRAL NT
1	4 g	VITA VM LC flow ENAMEL ENL
1	10 ml	VITA VM LC MODELLING LIQUID
1	5 ml	VITA VM LC GEL
1	–	Brush No. E 0 stain brush
1	–	Working instructions

VITA AKZENT® LC
Light-curing composite stain and glaze system used for characterizing the shade of restorations made of CAD/CAM/veneering composite, hybrid ceramic, denture teeth, denture bases and 3D-press acrylic polymers.

Recommended product combinations

VITA CAD-Temp can be characterized with the VITA AKZENT LC composite stains, individualized with VITA VM LC veneering composite and polished with VITA Polish Hybrid.

Symbol explanations

Manufacturer VITA Zahnfabrik		Manufacturing date	
Shelf life		Protect from sunlight	
Storage temperature		Lot number (batch)	
Product number		Medical device	
See Instructions for Use			

The following products require hazard identification:		
VITA**VM®LC MODELLING LIQUID** (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 BASE DENTINE, ENAMEL, EFFECT ENAMEL, NEUTRAL, GINGIVA (pastes)** (contains 2-dimethylaminoethyl methacrylate, triethylene glycol dimethacrylate)	Causes skin irritation. Causes severe eye irritation. May cause allergic skin reactions.	
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 life with long-lasting effects	
VITA AKZENT® LC EFFECT STAINS/ CHROMA STAINS/GLAZE	Danger Highly flammable liquid and vapor. Causes skin irritation. May cause allergic skin reactions. Causes serious eye damage. May cause respiratory irritation. Harmful to aquatic life with long-lasting effects Wear protective gloves/protective clothing/eye protection. Keep the container tightly closed. Protect from heat. No smoking.	

Protective clothing	While work is in progress, wear suitable safety goggles/ face protection, gloves and safety clothing. In case of formation of dust, use an extraction system or wear a face mask.	

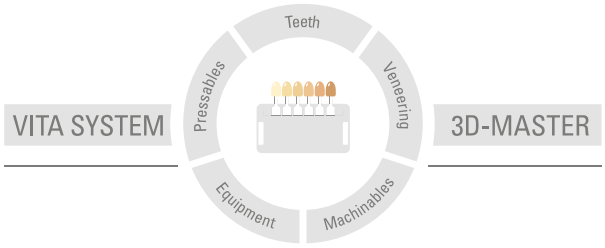
The corresponding safety data sheets can be downloaded at www.vita-zahnfabrik.com/sds.

General notes on handling

Information on reporting serious incidents in connection with medical devices, general risks associated with dental treatments, residual risks and (if applicable) short clinical safety and performance reports (SSCPs) can be found at www.vita-zahnfabrik.com/product_safety.

Information on disposal

The products labelled with a pictogram for hazardous substances are to be disposed of as hazardous waste.
Recyclable waste (such as attachments, paper and plastics) must be disposed of using appropriate recycling systems.
All other products are to be disposed of as mixed industrial waste.
If necessary, contaminated product residues should be pretreated in accordance with regional regulations and disposed of separately.



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: 2024-02

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 and the following products bear the mark

CE 0124

VITA CAD-Temp® · VITA**VM®LC** · VITA**VM®LC *flow***

MD Rx Only

CH REP VITA Zahnfabrik H. Rauter GmbH & Co.KG, Bad Säckingen (Germany)
Zweigniederlassung Basel c/o Perrig AG, Max Kämpf-Platz 1, 4058 Basel

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VITA

VITA Zahnfabrik H. Rauter GmbH & Co.KG
Spitalgasse 3 · 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

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