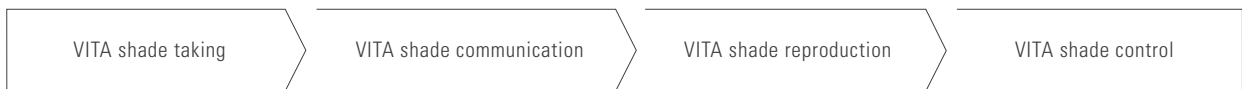
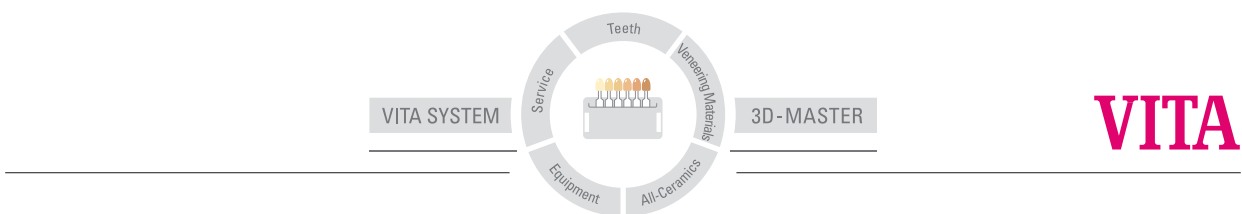


VITA CAD-Temp® monoColor/multiColor for inLab®

Working Instructions



Date of issue: 04.10



VITA

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

The material	4
Functions, characteristics, advantages	5
Indication and requirements for processing	6
Procedure	7
Polishing	10
Individualizing the shade	11
Clinical aspects	15
Recommended tools and materials	17
Package sizes and assortments	18
Accessories/Safety information	19



Sirona inLab system



Sirona inLab MC XL system



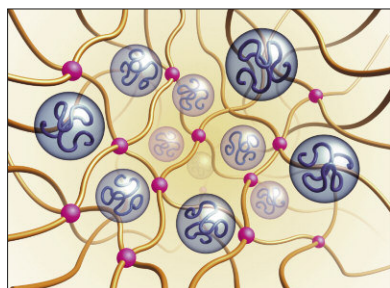
VITA CAD-Temp is also perfectly suited for processing in the Sirona Cerec chairside systems (fig. CEREC AC with MC XL milling system).




Information about the Sirona CAD/CAM systems is available from:

Sirona Dental Systems GmbH
Fabrikstraße 31 · D-64625 Bensheim
E-mail: contact@sirona.de
<http://www.sirona.com>

inLab®, CEREC® and inEos® are registered trademarks of Sirona Dental Systems GmbH

The VITA CAD-Temp blocks consist of a unique fiber-free, homogeneous, high-molecular and cross-linked acrylate polymer with microparticle filler, the so-called MRP material.



-  PMMA pearls, swelled by monomer
-  cross-linked monomer
-  inorganic microparticle filler polymerized into polymer network

In the MRP material (Microfiller Reinforced Polyacrylic) developed by VITA, inorganic microfillers are polymerized into the network and a completely homogeneous, methyl methacrylate-free material is obtained by the unique NPV repressing technique of VITA, which exhibits superior material quality and outstanding abrasion resistance.


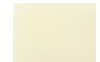

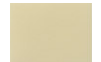
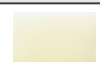
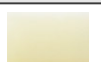
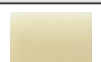
Physical properties*

Properties	Unit of measure	Value
Flexural strength	MPa (Nmm ⁻²)	>80
Modulus of elasticity	MPa (Nmm ⁻²)	2800
Softening temperature (DSC)	°C	118
Inorganic filler content	% by weight	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	
Color 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 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.

The shade concept

VITA CAD-Temp is available in the following VITA SYSTEM 3D-MASTER basic shades as CAD-Temp monoColor (= "T") or as CAD-Temp multiColor (= "TM") for particularly high demands on esthetics:

CAD-Temp monoColor	0M1T*	1M2T	2M2T	3M2T
				
CAD-Temp multiColor		1M2TM	2M2TM	3M2TM
				





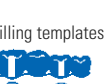
* for the reproduction of bleached teeth (only available in size CT-40)

- Very high material homogeneity thanks to the industrial polymerization process.
- Methyl methacrylate-free composite, hence no irritation of the gingiva and the pulp by residual monomers.
- Thanks to the omission of manual mixing or a cartridge system, mixing errors and polymerization shrinkage are avoided. This way high process reliability is ensured.
- Well-balanced combination of tensile strength and elasticity for the clinical use and the specific indication.
- High dimensional stability since the material features considerably higher strength than conventional composite materials for chairside temporary restorations.
- Temporary restorations made from VITA CAD-Temp can be removed from the die several times without the risk of fracture.
- Excellent abrasion resistance.
- No wedging in undercuts as it is found when using plastic materials.
- No time-consuming removal of excess material.
- No generation of polymerization heat inside the mouth (exothermics).
- Can be perfectly milled with the diamond tools of the inLab or CEREC system (approx. 15 -18 min per unit).
- No swelling even during extended residence time in the mouth.
- Considerably reduced accumulation of plaque.
- Lasting color stability and esthetics.
- Natural translucency and fluorescence.
- Radiopaque.
- Superior polishing characteristics.
- Can be individualized with the light-curing veneering composite VITA VM LC.
- CAD/CAM manufacturing ensures simple and quick reproducibility of the temporary restoration.
- Excellent esthetic results can be achieved with reduced amount of work.
- All provisional cements can be used for cementing.

Temporary restorations made from VITA CAD-Temp provide the following functions:



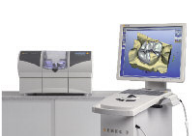

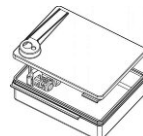








- Prophylactic functions:
 - avoiding the movement of abutment teeth
 - protection of tooth substance against bacterial, toxic and thermal effects
- Diagnostic and esthetic functions:
 - checking occlusion, phonetics, vertical dimension and esthetic result

VITA CAD-Temp is used for the fabrication of multi-unit, fully or partially anatomical long-term temporary bridge restorations with up to 2 pontics using the inLab or CEREC milling systems of Sirona. The bridge block can also be used for the fabrication of temporary crowns in the batch grinding technique (not possible with the MC XL CAD/CAM systems). The light-curing veneering composite VITA VM LC is used for building up or individualizing the shade of the restorations.

Indication	 Anterior crown	 Posterior crown	 Anterior bridges	 Posterior bridges	 Drilling templates
VITA CAD-Temp for inLab	●	●	●	●	●

● recommended

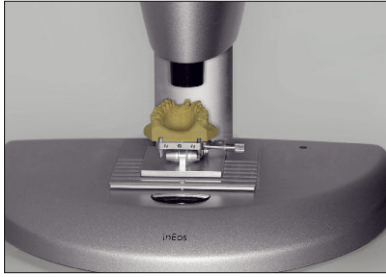
Requirements for processing

SIRONA CEREC CEREC 3D Software V3.6x 		SIRONA inLab inLab 3D Software V3.6x 		SIRONA CEREC MC XL CEREC 3D Software V3.6x 		SIRONA inLab MC XL inLab 3D Software V3.6x 	
Required: 		Polymer Starter Set (REF 6094713*) (Tank with reinforced filter system)					
Admixture of Dentatec: 5 ml				Admixture of Dentatec: 75 ml			
Polymer	recommended milling instruments		Polymer	required milling instruments			
	left	right		left	right		
CAD-Temp monoColor** CT-40	 Cone Bur 14 REF 5999771*	 Cylinder Pointed Bur REF 5855734*	CAD-Temp monoColor CT-40, CT-55	 Step Bur 12 S REF 6240167*	 Cylinder Pointed Bur 12 S REF 6240159*		
CAD-Temp multiColor** CTM-40	 Cone Bur 14 REF 5999771*	 Cylinder Pointed Bur REF 5855734*	CAD-Temp multiColor CTM-40	 Step Bur 20 REF 6259597*	 Cylinder Pointed Bur 20 REF 6259589*		

* REF = Sirona Prod. No.

** Note: can be processed in the CEREC milling system only from serial No. 5000 (or later) since previous milling systems are not suited for milling long blocks.

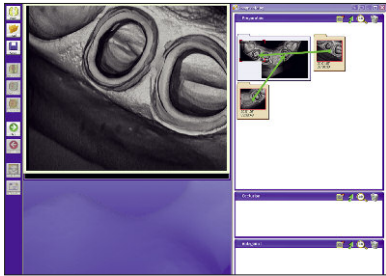




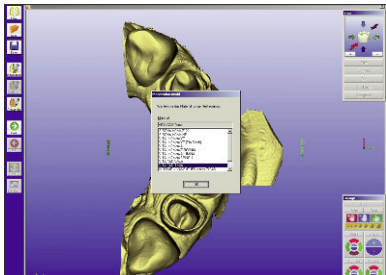
Simple processing – step by step

Place the model made from plaster suitable for scanning on the scan holder of the inEos system and carry out the scan process.*

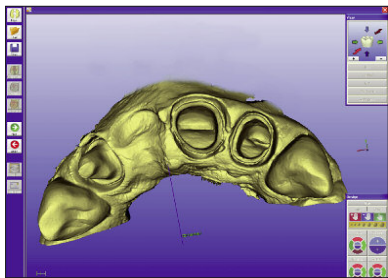
* To ensure perfect and economic processing, we recommend to carry out the scan process using the inEos system. The extremely short scanning times between 10 sec (single tooth scan) and 30 sec (bridges with 3-4 units) guarantee faster and trouble-free workflow. Additionally, the fabrication of a duplicate model is no longer required.



Optical impression of the model using the inEos system.



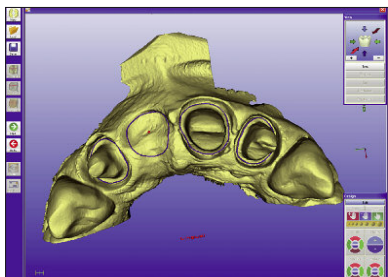
Select VITA CAD-Temp monoColor or multiColor in the material selection menu.



Designing (CAD) a fully anatomical long-term temporary bridge restoration using the inLab 3D software.

Note:

Use design method "bridge reduced" to be able to check the connector areas.



Important:

The following geometries or minimum wall thickness must be adhered to:

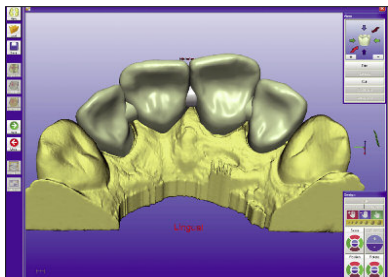
Connector areas:

Anterior bridges

- with one pontic 12 mm²
- with two pontics 12 mm²

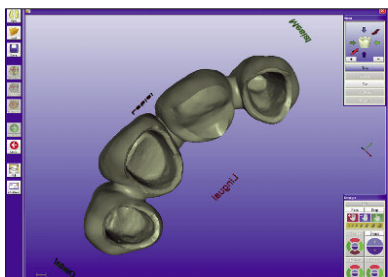
Posterior bridges

- with one pontic 12 mm²
- with two pontics 16 mm²

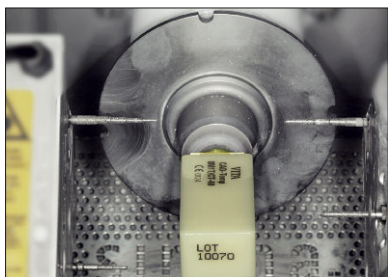


Minimum wall thickness

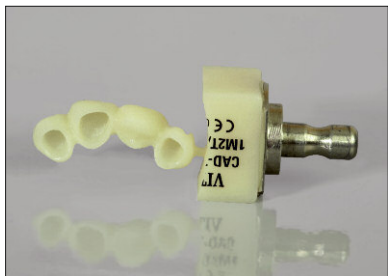
- occlusal: 1.5 mm the central fissure
- circumferential: 0.8 mm



Stability and function always take priority over esthetics!



Clamp in and mill the VITA CAD-Temp monoColor or multiColor block.



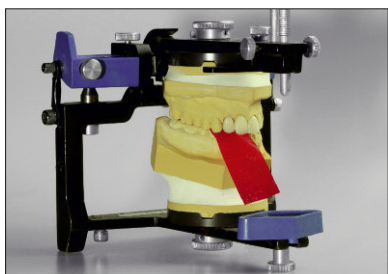
After milling (CAM) the lug is cut off using a fine cross-cut tungsten carbide bur.

If white spots, which were 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.



⚠ Important:

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



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. Standard acrylic polishing agents that are also suitable for intraoral use.

Avoid creating excessive heat.

⚠ Important:

Careful polishing is absolutely necessary to achieve a perfect result and avoid accumulation of plaque and the related negative effects on the shade.



Completed temporary bridge restoration on the working model.



To achieve enhanced esthetic appearance, the shade of temporary restorations made from VITA CAD-Temp can be individualized with the light-curing microparticle composite VITA VM LC especially in the translucent incisal area of anterior restorations or in the vestibular area of posterior restorations. Even thin layers of VITA VM LC allow to achieve very good results.



The VITA VM LC TEETH INDIVIDUALIZATION KIT, Prod. No. CVLCTIK is available for individualization.

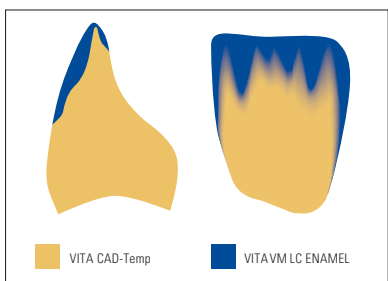
Please observe the information in the Working Instructions No. 1200E.



Controlled grinding or reducing of border areas is the precondition for a smooth transition between the VITA CAD-Temp temporary restoration and the light-curing microparticle composite VITA VM LC.



To ensure reliable bonding of VITA CAD-Temp and VITA VM LC, fine-cut tungsten carbide burs should be used.

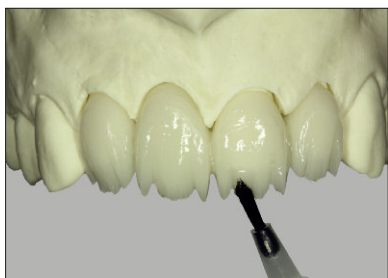


⚠ Important:

Reduction of VITA CAD-Temp:

Temporary anterior restorations in the incisal area: max. 0.5 mm.

Temporary posterior restorations in the vestibular area: max. 0.3 mm



The ground surface must be carefully cleaned and wetted with VITA VM LC MODELLING LIQUID to achieve reliable bonding to the VITA CAD-Temp base material.



Individualizing is easier if a small quantity of VITA VM LC MODELLING LIQUID is added onto the modelling instrument.

⚠ Important:

The liquid must not be used to dilute the materials.

VITA VM LC MODELLING LIQUID irritates eyes, skin and respiratory system. Avoid contact with the skin.

Work under extraction system.



Individualizing the shade

Depending on which type of individualization is to be achieved, the suitable shade is applied: Ten different VITA VM LC PAINT materials are available for this purpose. For fixation of the materials, intermediate polymerization must be carried out.

For information on polymerization and hazard information refer to the Working Instructions for VITAVMLC, No. 1200E.

⚠ Important:

VITA VM LC PAINT must not be on the surface and must be completely coated with dentine or enamel materials.

When applying the materials, air inclusions must be avoided.



⚠ Note:

The total layer thickness of the restoration individualized with VITA VM LC should not be more than 0.5 mm for anterior restorations and 0.3 mm for posterior restorations to ensure sufficient stability of the temporary restoration.



Apply a small quantity of VITA VM LC ENAMEL, EFFECT ENAMEL or NEUTRAL in the upper third of the veneer surface (Incisal or vestibular area). Then final polymerization is carried out.

⚠ Important:

Before performing corrections with VITA VM LC materials, the surface of the temporary restoration must be cleaned and wetted with MODELLING LIQUID.

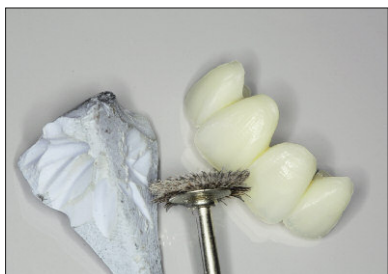
Polymerization

Information on polymerization and a list of suitable polymerization units can be found on page 21 of the Working Instructions for VITA VM LC (No. 1200E).

Intermediate polymerization can be carried out any time during layering.

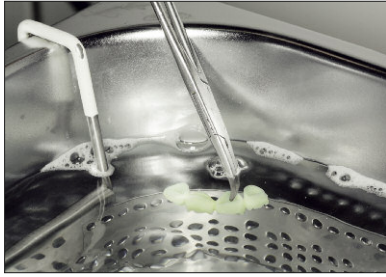


Fine-cut tungsten carbide burs must be used for corrections of contours during individualization.



Polishing

See information on page 10.



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

We recommend a short residence time of approx. 1 minute.

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

Cleaning with steam results in heat and compressive stress and must generally be avoided.



Completed VITA CAD-Temp temporary bridge restoration individualized with VITAVMLC on the working model.





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



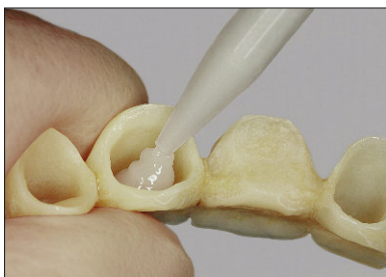
Preparation after removal of the VMK bridge.



Digital shade measurement with the VITA Easyshade system.



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



Application of the temporary adhesive cement.



Temporary restoration being seated.



Removal of excess material.



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

Basically, all provisional cements/adhesive materials are suitable. Translucent materials allow to achieve improved esthetics. If the definitive restoration is to be cemented adhesively, eugenol-free cementing materials must be used.

See page 17, Recommended materials and tools. Please observe the processing instructions and indications of the respective manufacturers.
















The final result is esthetically pleasing.

- Texturmarker (SW-Dental)
- Veneering material (C&B material) for individualization:
VITA VM LC TEETH INDIVIDUALIZATION KIT, VITA Prod. No. CVLCTIK
- Fine and coarse cross-cut tungsten carbide burs
- Polishing materials, also for intraoral use
e.g. Dia Glace (Yeti)
Opal polishing paste (Renfert)
Dental Diamond Stick (Shofu)
Prisma Gloss (Dentsply)
- Provisional, eugenol-free cementing materials
e.g. Provicol QM (Voco)
Systemp.link (IvoclarVivadent)
RelyX Temp NE (3MEspe)
Prevision Cem (Heraeus Kulzer)
Freegenol (GC)
Temp Bond Clear (KerrHawe)

 **Note:**

Please observe the instructions for use and indications of the manufacturers of the products listed above.

	Block designation	Size/piece/s per package	Shades	Standard package	Large package
VITA CAD-Temp monoColor	CT-40 	15.5 x 19 x 39 mm 2/10 pieces	0M1T 	EC40M1TCT402	EC40M1TCT4010
			1M2T 	EC41M1TCT402	EC41M1TCT4010
			2M2T 	EC42M1TCT402	EC42M1TCT4010
			3M2T 	EC43M1TCT402	EC43M1TCT4010
	CT-55 	15.5 x 19 x 55 mm 1 piece	1M2T 	EC41M1TCT551	–
			2M2T 	EC42M1TCT551	–
3M2T 			EC43M1TCT551	–	
VITA CAD-Temp multiColor	CTM-40 	15.5 x 19 x 39 mm 2/10 pieces	1M2TM 	EC41M1TCTM402	EC41M1TCTM4010
			2M2TM 	EC42M1TCTM402	EC42M1TCTM4010
			3M2TM 	EC43M1TCTM402	EC43M1TCTM4010



A bridge with up to 6 units can be produced from a single VITA CAD-Temp CT-55 block.



VITAVM® LC TEETH INDIVIDUALIZATION KIT

Prod. No. CVLCKIT

Assortment for characterization of the shade and for individualization

Quantity	Content	Material
10	2 g	PAINT PT1 – 19
1	2 g	WINDOW WIN
3	4 g	EFFECT ENAMEL EE3, EE6, EE9
1	4 g	NEUTRAL NT
2	4 g	ENAMEL ENL, END
1	30 ml	MODELLING LIQUID
1	piece	Brush holder
1	pack	Disposable brush tips, 50 pcs

VITAVM® LC MODELLING LIQUID



Irritant

Irritates eyes, skin and respiratory system.

Avoid contact with the skin.

Work under extraction system.

Storage information: Do not store above 25 °C.

Do not expose to direct sunlight.

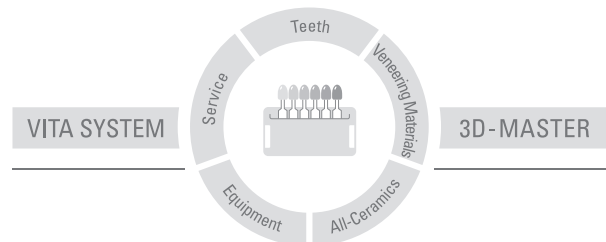
**Please refer to the safety data sheet
for more detailed information!**

Wear suitable protective goggles/face mask,
protective gloves and protective clothing when working.

Work under an extraction unit.



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: 04.10

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 CAD-Temp® for inLab®
VITAVM®LC

US 5498157 A · AU 659964 B2 · EP 0591958 B1

inLab®, inEos® and CEREC® are registered trademarks of Sirona Dental Systems GmbH, Bensheim, Germany

We would like to express our gratitude to Mr. Kurt Reichel (Master Dental Technician) from Hermeskeil and Dr. Andreas Kurbad from Viersen for their cooperation and supply of illustrative material for the preparation of these working instructions.

VITA

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