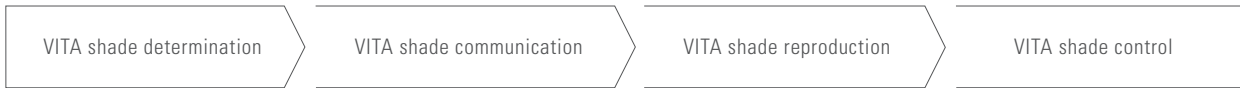


# VITA LUTING SET

## Working Instructions



Date of issue: 09.15

VITA shade, VITA made.

**VITA**

## VITA LUTING SET

The VITA LUTING SET is a system for adhesive bonding of etchable hybrid ceramic, feldspar and glass ceramic restorations as well composite restorations to the tooth substance. It contains all materials required for adhesive bonding techniques:

- **VITA ENAMIC®**
- **VITABLOCS®**
- **VITA PM®9 press ceramic**
- **VITA SUPRINITY®**
- **VITAVM®LC microparticle composite**

Restorations made of oxide ceramics, such as **VITA YZ**, **can not be etched** and require a special bonding technique with modified Bis-GMA composite (e.g. Panavia 21, Panavia F 2.0, Kuraray).

Please also read the information in our brochure "Clinical Aspects of All-Ceramics", No. 1696 and the product information "CAD/CAM materials, Bonding recommendations", No. 10146.



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## Description of the components



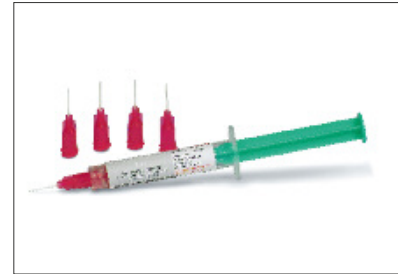
### VITA ETCHANT GEL

Phosphoric acid gel (35 %) for etching of tooth enamel, stable consistency and stability, dark blue color.



### VITA A.R.T. BOND

Two-step dentine/enamel adhesive for bonding ceramic and composite restorations to hard tooth substance and for sealing the cavity to avoid postoperative sensitivity. Also suitable as a protective varnish to desensitize sensitive tooth necks.



### VITA CERAMICS ETCH

Phosphoric acid gel (5%) for etching ceramic restorations. Red color. For extraoral use only.



### VITASIL®

Single-component silane bonding agent. Creates a chemical bond between ceramic restorations and adhesive composite.



### VITA DUO CEMENT

Dual-curing two-component fine hybrid composite with medium viscosity. Available in universal shade for VITAPAN classical and VITA SYSTEM 3D-MASTER.

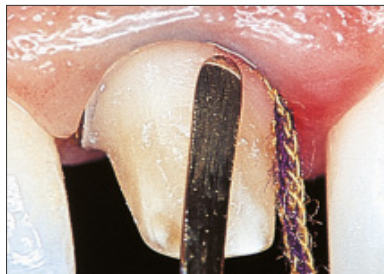
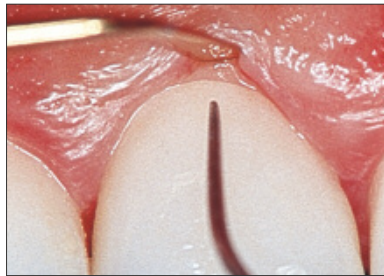
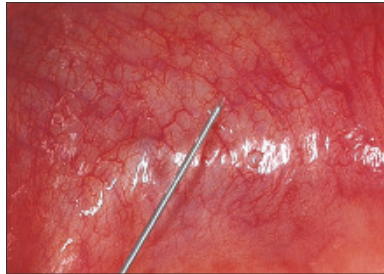


### VITA OXY-PREVENT

Neutral-colored glycerine gel for preventing the formation of the oxygen inhibition layer for DUO CEMENT. Also suitable as a try-in paste.

# Cementation of etchable ceramic restorations

## Clinical step-by-step procedure – conventional method



### 1. Try-in of the restoration

Local anaesthesia

Try-in of the restoration.

Visual and tactile control of  
the marginal fit.

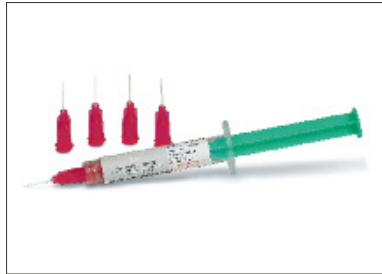
In the case of inlays use rubber dam.

In the case of crowns and inlays,  
clean the prepared surfaces with pumice.

In the case of inlays clean with pumice.

For crowns and veneers use  
retraction cord # 00.

## Cementation of etchable ceramic restorations



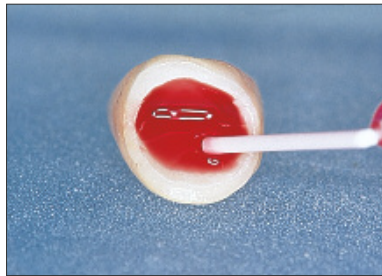
### 2. Conditioning of the restoration

VITA CERAMICS ETCH, 3 ml  
5% hydrofluoric acid gel



#### **Note:**

VITA CERAMICS ETCH is a hazardous material. For extraoral use only!  
Please observe the information on page 30.



Apply VITA CERAMICS ETCH to the inner surface of the ceramic restoration.  
Etching time: 60 seconds; for  
VITA SUPRINITY: 20 seconds!

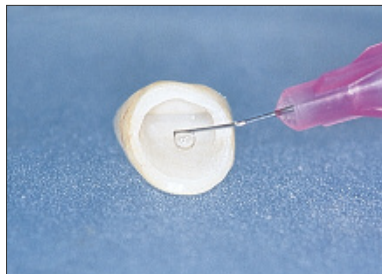
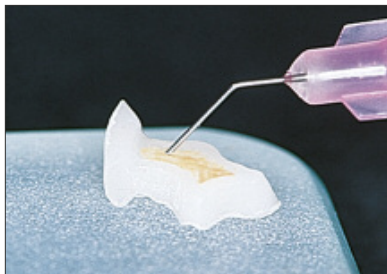
Completely remove any remaining acid  
by using waterspray or ultrasonicate  
in distilled water.

**Do not brush off!**

**Risk of contamination!**



VITA VITASIL, 3 ml  
Single-component silane bonding agent



Silane etched surfaces with VITASIL.

Leave the highly volatile solution to dry  
at room temperature for 5 minutes.  
Do not touch the surface again without  
wearing gloves!

## Cementation of etchable ceramic restorations



### 3. Applying the Dentin Bonding Agent

Insulate adjacent teeth with transparent strips, adjacent preparations with temporary restoration.



VITA CEREC ETCHANT GEL  
35% phosphoric acid gel



Only the enamel is etched with  
VITA ETCHANT GEL for 20-30 seconds.

Spray and dry for 30 sec.  
Check: the etched surface should have  
a white, opaque appearance.



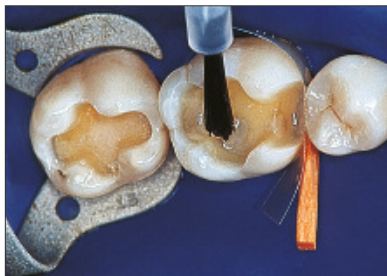
## Cementation of etchable ceramic restorations



VITA A.R.T. BOND SET



Mix PRIMER A+B in a 1:1 ratio for 5 sec.



A 2-step Dentin Bonding Agent.

The A.R.T. BOND PRIMER mixture is agitated into the prepared tooth surface for 30 sec.



Dry tooth surface for 15 sec.



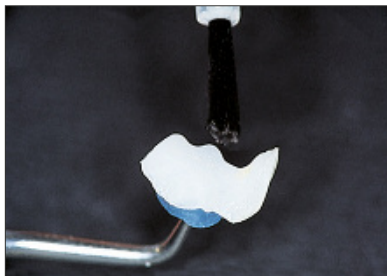
## Cementation of etchable ceramic restorations



VITA A.R.T. BOND, BOND (Bonding Resin)



Brush VITA A.R.T. BOND Bonding Resin into the primed surface for 20 seconds.



Apply VITA A.R.T. BOND Bonding Resin to etched and silanised ceramic restoration using a brush.



Carefully remove excess from the tooth and the restoration using the air syringe (do not blow with full pressure).

**Light cure only on the tooth for at least 20 sec.!**

## Cementation of etchable ceramic restorations



### 4. Mixing the composite cement

VITA DUO CEMENT Base and Catalyst



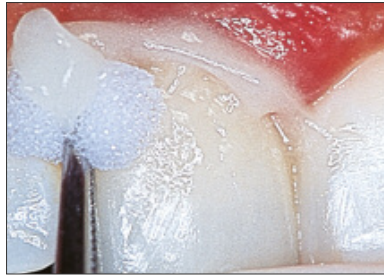
VITA DUO CEMENT  
Mix Base and Catalyst in a 1:1 ratio using  
1.5 cm of material out of each syringe.

Mix these homogeneously with  
a plastic spatula for 30 sec.



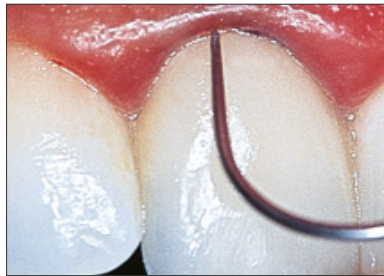
Apply to the inner surfaces of the  
restoration using a disposable brush.

## Cementation of etchable ceramic restorations



### 5. Insertion

Seat the restoration.  
Check the fit visually and by tactile means.



Remove excess interproximally using dental floss and a probe; for all other surfaces remove with foam pellets.



VITA OXY-PREVENT, 3 ml  
Glycerine gel

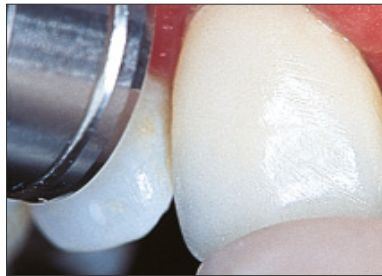


Apply VITA OXY-PREVENT over the margins  
using application tips.

## Cementation of etchable ceramic restorations



Curing light



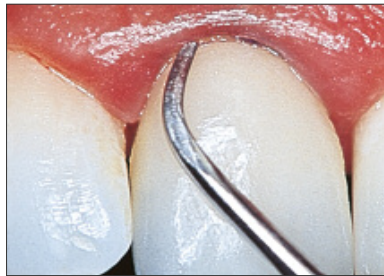
Light curing:  
60 seconds interproximally from the  
buccogingival and palatogingival directions,  
and finally 60 seconds from the  
occlusal direction.

## Cementation of etchable ceramic restorations

### 6. Finishing

Remove excess material:

- buccally and orally: in the case of veneers and crowns with fine scalars
- interproximally: with flexible discs
- occlusally: f.e. with Composhape diamonds



Checking the occlusion  
with indication paper.

Removing premature contacts  
with finishing diamonds (40 or 15  $\mu$ m).



Polishing:  
Polish adjusted ceramic surfaces  
with flexible discs and Composhape.

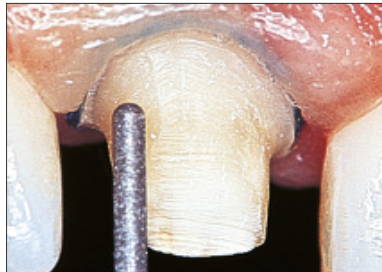
Fluoridating the working area.

## What is the DUAL BONDING TECHNIQUE?

With the DUAL BONDING TECHNIQUE, the Dentin Bonding Agent (DBA) is used twice. The first application is carried out directly after the final preparation before taking the impression. The second application occurs after removing the temporary restoration just prior to permanent cementation (also with eugenol-containing temporary cements). This results in considerably increased bond strength of the restoration to the tooth. Furthermore, this technique reduces the risk for postoperative sensitivity.

## Literature on the Dual Bonding Technique:

Paul St, Schärer P. The "Dual Bonding Technique" - A modified method to improve adhesive luting procedures. Int J Periodont Rest Dent 1997; 17(6): 537-545. Bertschinger C, Paul St, Lüthy H, Schärer P. Dual Application of dentin bonding agents: Effect on bond strength. Am J Dent 1996; 9: 115-119



## Step-by-step clinical procedure

Insulating the working area  
inlays: rubber dam  
veneers: rubber dam or  
retraction cord # 00  
crowns: retraction cord # 00  
or rubber dam

### 1. First application of DBA directly after final preparation before taking the impression

Final preparation.

Rinse and dry the stump/cavity.

**Do not etch the enamel!**



## Dual Bonding Technique with VITA A.R.T. BOND according to Dr. Stefan J. Paul, Zurich

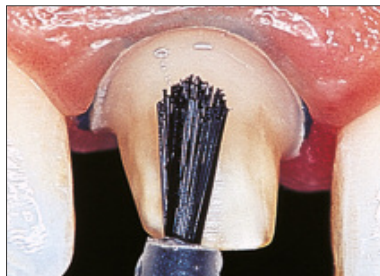


VITA A.R.T. BOND SET

2-step Dentin Bonding Agent.



Mix PRIMER A+B in a 1:1 ratio for 5 sec.



Brush A.R.T. BOND PRIMER mixture into the prepared tooth surface for 30 sec.



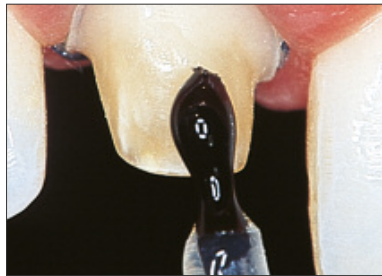
Dry tooth surface for 15 sec.



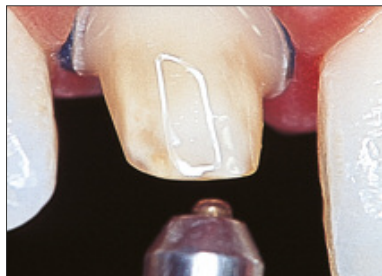
## Dual Bonding Technique with VITA A.R.T. BOND according to Dr. Stefan J. Paul, Zurich



VITA A.R.T BOND, BOND (Bonding Resin)



Brush VITA A.R.T. BOND, Bonding Resin into the primed surface for 30 sec.

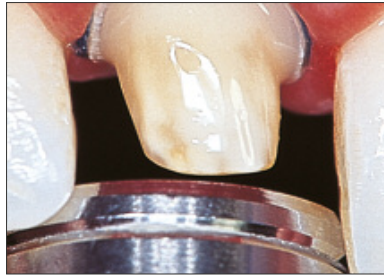


Carefully remove excess with an air syringe.



Brush again using the same brush, without taking up new bonding resin.

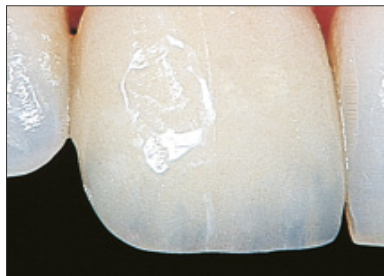
## Dual Bonding Technique with VITA A.R.T. BOND according to Dr. Stefan J. Paul, Zurich



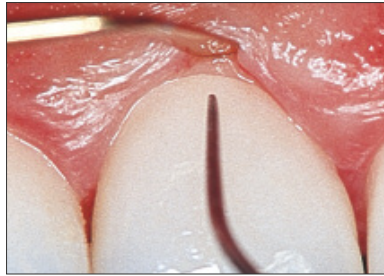
**Light cure for 60 seconds!**



Remove the oxygen inhibition layer  
using foam pellets.  
Then take the impression.

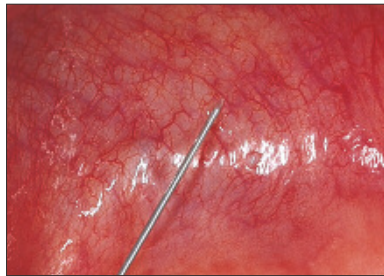


Fix the temporary restoration with  
provisional cement (e.g. Temp Bond).



## 2. Try-in of the restoration

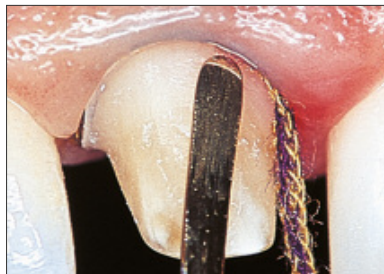
Try-in of the restoration.  
Check the marginal fit visually  
and by tactile means.



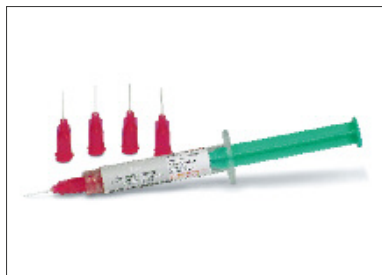
Local anaesthesia



Use rubber dam for inlays.  
For crowns and veneers, clean the  
prepared surfaces with pumice.



Clean inlay cavities with pumice.  
For crowns and veneers  
use retraction cord # 00.



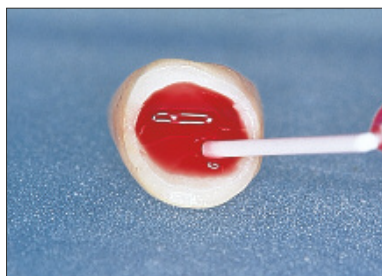
### 3. Conditioning of the restoration

VITA CERAMICS ETCH, 3 ml  
5% hydrofluoric acid gel



**Note:**

VITA CERAMICS ETCH is a hazardous material. For extraoral use only!  
Please observe the information on page 30.



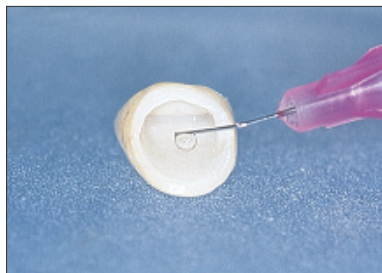
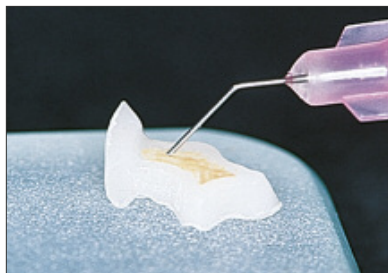
Apply VITA CERAMICS ETCH to the inner surface of the ceramic restoration.  
Etching time: 60 sec.  
Completely remove any remaining acid by using waterspray or ultrasonicate in distilled water.

**Do not brush off!**

**Risk of contamination!**



VITA VITASIL, 3 ml  
Single component silane bonding agent



Silanize the etched surfaces with VITASIL.  
Let the highly volatile solution dry at room temperature for 5 min.  
Do not touch the surface again without wearing gloves!





#### 4. Second application of Dentin Bonding Agent prior to permanent cementation

Insulate adjacent teeth with transparent strips; insulate adjacent preparations with the temporary restoration.



VITA CEREC ETCHANT GEL  
35% phosphoric acid gel



Etch **only** the enamel with VITA CEREC ETCHANT GEL for 20-30 sec. Rinse and dry for 30 sec. Check: the etched enamel surface must be opaque-white. In some cases remaining bonding resin from the first application needs to be removed. In these cases repeat etching procedure.

## Dual Bonding Technique with VITA A.R.T. BOND according to Dr. Stefan J. Paul, Zurich



VITA A.R.T. BOND SET

2-step dentin bonding agent.



Mix PRIMER A+B in a 1:1 ratio for 5 sec.



Brush A.R.T. BOND PRIMER mixture into the prepared tooth surface for 30 seconds.



Dry the tooth surface for 15 sec.

## Dual Bonding Technique with VITA A.R.T. BOND according to Dr. Stefan J. Paul, Zurich



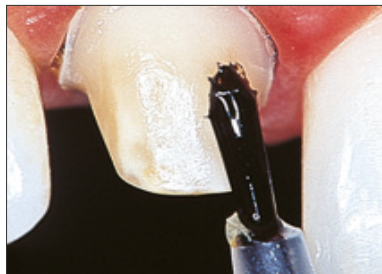
VITA A.R.T. BOND, BOND (Bonding Resin)



Brush VITA A.R.T. BOND Bonding Resin into the primed surface for 30 seconds.



Carefully remove excess using the air syringe (do not blow with full pressure).



Brush again using the same brush, without taking up new bonding resin.

**Do not light cure at this time!  
Only light cure after seating the  
restoration and removing excess.**



## Dual Bonding Technique with VITA A.R.T. BOND according to Dr. Stefan J. Paul, Zurich



### 5. Mixing the composite cement

VITA DUO CEMENT KIT



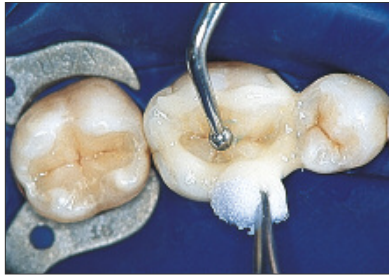
VITA DUO CEMENT

Mix Base and Catalyst in a 1:1 ratio using 1.5 cm of material out of each syringe. Mix these homogeneously with a plastic spatula for 30 sec.



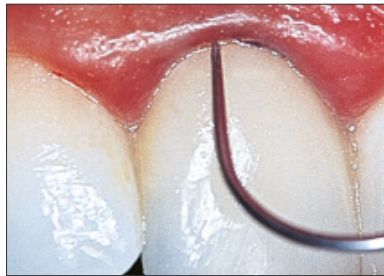
Apply to the inner surfaces of the restoration using a disposable brush.

## Dual Bonding Technique with VITA A.R.T. BOND according to Dr. Stefan J. Paul, Zurich



### 6. Insertion

Seat the restoration.  
Check the fit visually and by tactile means.



Remove excess interproximally using  
dental floss and a probe; in all other areas  
remove with foam pellets.



VITA OXY-PREVENT, 3 ml  
Glycerine Gel



Apply VITA OXY-PREVENT over the margins  
using application tips.

## Dual Bonding Technique with VITA A.R.T. BOND according to Dr. Stefan J. Paul, Zurich



Curing light

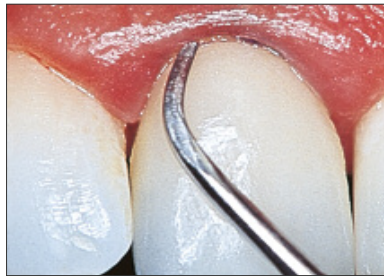


Light curing:  
60 seconds interproximally from the  
buccogingival and palatogingival directions,  
and finally 60 seconds from the occlusal  
direction.

## 7. Finishing

Remove excess cement:

- buccally and orally: in the case of veneers and crowns with fine scalars
- interproximally: with flexible discs
- occlusally: e.g. with Composhape diamonds



Check the occlusion with indication paper. Remove premature contacts with finishing diamonds (40 or 15  $\mu$ m as appropriate).

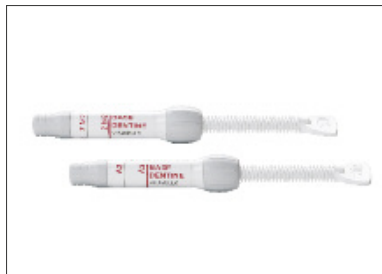


Polishing:

Polish adjusted ceramic surface with flexible discs and Composhape.

Fluoridating the working area.

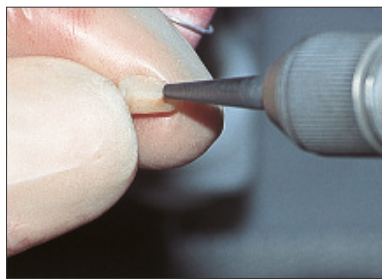
## Cementing composite restorations made from VITAVM®LC



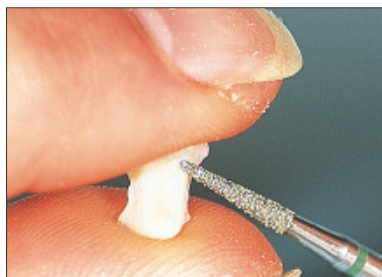
### 1. Try-in of the restorations as for ceramic (see page 5)

### 2. Conditioning of the restoration

Please note: The conditioning used for the inner surface of composite restorations depends much on the type of composite and the manufacturer's instructions. The following data are applicable to VITAVM®LC.



The internal surfaces (to be cemented) should be sandblasted with aluminium oxide 50-110 µm with a pressure of 2-3 bar.



Alternative: roughen using  
a fine-grained diamond (25 µm)  
**Do not etch or silanize!**

Carefully remove grinding debris (spray, ultrasonic bath) and dry the restoration. Do not touch the surface again. Tip for mounting: bond an excavation bur or dental floss to the restoration using light-curing resin.

**The further procedure is the same  
as for 3.-6. Cementation of Ceramic  
Restorations.**  
(see pages 7-13)

## Assortments - Delivery forms

**VITA LUTING SET, Complete assortment** – Art.-No. FLSET  
contain VITA ETCH & BOND KIT and VITA CEMENTATION KIT

### **VITA ETCH & BOND KIT** – Art.-No. FLEBSET

- 1 VITA ETCHANT GEL (for enamel etching), syringe 2.5 ml **CE** 0123
- 1 VITA A.R.T. BOND, PRIMER A, bottle 5 ml **CE** 0123
- 1 VITA A.R.T. BOND, PRIMER B, bottle 5 ml **CE** 0123
- 1 VITA A.R.T. BOND, BOND (Bonding Resin), bottle 5 ml **CE** 0123
- disposable brush tips, 2 packs of 50 pcs **CE**
- 20 disposable application needles for ETCHANT GEL **CE**
- 3 brush holders **CE**
- 40 disposable mixing trays

### **VITA CEMENTATION KIT** – Art.-No. FLCSET

- 1 VITA CERAMICS ETCH (ceramic etching gel), syringe 3 ml **CE**
- 1 VITASIL® silane bonding agent, syringe 3 ml **CE** 0124
- 1 VITA DUO CEMENT Base, syringe 2.5 g **CE** 0123
- 1 VITA DUO CEMENT Catalyst, syringe 2.5 g **CE** 0123
- 1 VITA OXY-PREVENT (glycerine gel), syringe 3 ml **CE**
- 1 mixing pad
- 20 disposable spatulas
- 20 disposable application needles, red for CERAMICS ETCH **CE**
- 30 disposable application needles, lavender for VITASIL® **CE**
- 10 disposable application needles, green for OXY-PREVENT **CE**
- 5 spare syringe caps

**CE** 0124 Manufacturer: VITA Zahnfabrik

**CE** 0123 Manufacturer: Coltène/Whaledent AG, Switzerland



## Refill packages · Storage · Labeling · Disposal

### Refill packages

	Art.-No.
• VITA A.R.T. BOND SET: PRIMER A, 5 ml, PRIMER B, 5 ml, BOND, 5 ml, accessories	FCABS
• VITA A.R.T. BOND, PRIMER A+B Refill Pack	FCABP
• VITA A.R.T. BOND, BOND Refill Pack	FCABB
• VITA ETCHANT GEL KIT (enamel etching gel), 2 syringes containing 2.5 ml	FCEGK
• VITA ETCHANT GEL disposable application needles, pack of 20 pcs.	FCEAN
• VITA DUO CEMENT KIT, syringes each of Catalyst and Base paste containing 2.5 g	FCDCK
• VITA CERAMICS ETCH (ceramic etching gel), syringe 3 ml, with 20 application needles	FCE3
• VITASIL® silane coupling agent, syringe 3 ml, with 30 application needles	FVS3
• VITA OXY-PREVENT glycerine gel, syringe 3 ml, with 10 application needles	FOP3
• Disposable spatula, pack of 20 pcs.	FZS
• Disposable brush tips, pack of 50 pcs.	FCPS
• Brush holder for disposable brush tips	FCPHW

### Storage

The materials of the VITA LUTING SET should be stored in a refrigerator at 4-8 °C.

If used up quickly, these can be stored at room temperature (approx. 23°C) after the first use, provided that the products are protected from direct sunlight and other sources of heat.




### Labeling



The expiry date and the lot number are printed on the respective packages/containers.




### Disposal







Only completely empty packages of VITA CERAMICS ETCH (contains 5 % hydrofluoric acid) and VITA ETCHANT GEL (contains 35 % phosphoric acid) may be disposed of.



The following VITA products require hazard identification:		
<p><b>VITA A.R.T. BOND</b> (Dentine/enamel adhesive system)</p> <p><b>- BOND</b></p>	<p><b>Irritating effect/Sensitization</b></p> <p>Causes skin irritation. May cause allergic skin reactions. Causes severe eye irritation. May cause respiratory irritation.</p> <p>When working with the product, wear suitable safety goggles, gloves and safety clothing. After contact with skin: wash with plenty of water. In case of contact with eyes: Rinse with water for a few minutes and seek medical advice. In case of skin irritation or rash: seek medical advice/consult a doctor.</p>	
<p><b>- PRIMER A</b></p>	<p><b>Sensitization</b></p> <p>May cause allergic skin reactions. Contains maleic acid.</p> <p>When working, wear safety goggles/protective gloves. In case of skin irritation or rash: seek medical advice/consult a doctor.</p>	
<p><b>- PRIMER B</b></p>	<p><b>Irritating effect/Sensitization</b></p> <p>Causes skin irritation. May cause allergic skin reactions. Causes severe eye irritation. May cause respiratory irritation.</p> <p>When working with the product, wear suitable safety goggles, gloves and safety clothing. After contact with skin: wash with plenty of water. In case of contact with eyes: Rinse with water for a few minutes and seek medical advice. In case of skin irritation or rash: seek medical advice/consult a doctor.</p>	

<p><b>VITA DUO CEMENT</b> (Dual-curing fine-hybrid luting composite)</p> <p><b>- Base paste</b></p>	<p><b>Irritating effect/Sensitization</b></p> <p>Causes skin irritation. May cause allergic skin reactions. Causes severe eye irritation.</p>	
<p><b>- Catalyst paste</b></p>	<p><b>Irritating effect/Sensitization</b></p> <p>Causes skin irritation. May cause allergic skin reactions. Causes severe eye irritation. May cause respiratory irritation.</p>	
<p><b>- Base and Catalyst paste</b></p>	<p>Wear suitable safety goggles, gloves and safety clothing. After contact with skin: wash with plenty of water. In case of contact with eyes: Rinse with water for a few minutes and seek medical advice. In case of skin irritation or rash: seek medical advice/consult a doctor.</p>	

<p><b>VITA CERAMICS ETCH</b> (hydrofluoric acid ceramic etching gel)</p>	<p><b>Caustic / Toxic</b></p> <p>For indirect 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.</p>	 
<p><b>VITA ETCHANT GEL</b> (Phosphoric acid etching gel)</p>	<p><b>Caustic</b></p> <p>Causes severe skin burns and damage to eyes. Contains phosphoric acid. When working with the product, do not eat and drink. Do not inhale gas / fume / vapor / aerosol. In case of contact with eyes, rinse thoroughly with water and consult a doctor. When working with the product, wear suitable safety goggles / face protection, protective gloves, and protective clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste.</p>	

<b>VITASIL</b> <b>(Silane bonding agent)</b>	<b>Highly flammable</b>  Highly flammable liquid and vapor. Store container well sealed at an adequately ventilated place. Keep away from ignition sources. - No smoking. Do not empty into drains. This material and its container must be disposed of as hazardous waste.	 
<b>Personal protective equipment</b>	When working with the product, wear suitable safety goggles / face protection, gloves and safety clothing.	   

The corresponding safety data sheets can be downloaded at [www.vita-zahnfabrik.com](http://www.vita-zahnfabrik.com) or requested by fax at (+49) 7761-562-233.

These instructions were prepared with the kind assistance of **Dr. Stefan J. Paul Paul (private lecturer)**, Zurich.

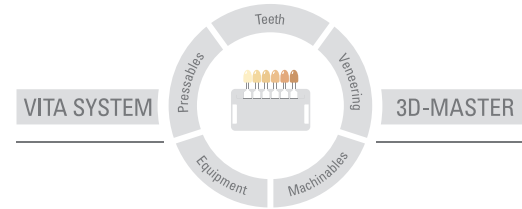
**Literature on the Dual Bonding Technique:**

Paul St, Schärer P. The "Dual Bonding Technique"- A modified method to improve adhesive luting procedures. Int J Periodont Rest Dent 1997; 17(6): 537-545.

Bertschinger C, Paul St, Lüthy H, Schärer P. Dual Application of dentin bonding agents: Effect on bond strength. Am J Dent 1996; 9: 115-119



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



**Please note:** Our products should be used according to the working instructions. We cannot be held liable for damages resulting from incorrect handling or usage. The user is furthermore obliged to check the product before use with regard to its suitability for the intended area of applications. We cannot accept any liability if the product is used in conjunction with porcelains and equipment from other manufacturers which are not compatible or not authorized for use with our product. Furthermore, our liability for the correctness of this information is independent of the legal ground and, in as far as legally permissible, is limited to the invoiced value of the goods supplied excluding turnover tax. In particular, as far as legally permissible, we do not assume any liability for profit loss, for indirect damages, for consequential damages or for claims of third parties against the purchaser. Claims for damages based on fault liability (culpa in contrahendo, breach of contract, unlawful acts, etc.) can only be made in the case of intent or gross negligence. The VITA Modulbox is not necessarily a component of the product.

Date of issue of these working instructions: 09.15

After the publication of these working instructions any previous versions become obsolete.

The current version can be found at [www.vita-zahnfabrik.com](http://www.vita-zahnfabrik.com)

# VITA

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