crea.lign

Veneering composite

Manual

crea.lign freestyle

create natural beauty

powered by
visio.lign

Layering scheme - Bonding system

Framework material

- PMMA denture resins
- Composite
- High-performance polymers BioHPP
- PEEK/PEKK/PAEK
- Titanium
- Non-precious metal alloys
- Zirconium oxide
- Oxide ceramics
- *Precious metal alloys (Au, Ag, Pt, Pd)*
- *eco-alloys*
- *Lithium (di)silicate*
- *Veneering and press ceramics*

Adhesive

- visio.link
- MKZ Primer
- MKZ Primer + MKZ EM-Activator
- K-Primer

Veneer material (dentine)

- Opaquer combo.lign (for retentions)
- crea.lign opaquer
- combo.lign bonding composite
- crea.lign paste dentine

and/or

- crea.lign gel Dentin
- crea.lign paste Enamel/Incisal/Transpa

and/or

- crea.lign gel Enamel/Incisal/Transpa

Red-white-customisation with

- crea.lign Gel GUM

and/or

- crea.lign Paste GUM

Customisation of crea.lign paste or crea.lign gel with

- crea.lign® Modifier
- visio.paint
- crea.lign® Stain

1. Framework conditioning

Preparation of the adhesive bond of composites:
- Titanium
- Non-precious metal alloys
- Zirconium oxide
- Oxide ceramics

Conditioning of metal and zirconium frameworks (CoCr/NPM/titanium/zirconium)
Sandblast metal frameworks at 3 to 4 bar and zirconium frameworks at max. 2 bar with 110 µm grain aluminium oxide.
The framework must not be cleaned with a steam jet after sandblasting. Any impurities should be removed using alcohol and a clean brush.
Then apply the MKZ Primer and wait until it evaporates.

(Mix 1: 1)

Preparation of the adhesive bond of composites:
- Precious metal alloys (Au, Ag, Pt, Pd)
- eco-alloys (low precious metal alloys)

Conditioning of precious metal frameworks (palladium-based/silver-based alloy)
Sandblast metal frameworks with 110 µm grain aluminium oxide at a pressure of 2 to 3 bar. The framework must not be cleaned with a steam jet after sandblasting. Any impurities should be removed using alcohol and a clean brush. Then mix the MKZ Primer and the MKZ EM-Activator at a ratio of 1:1, apply and wait until the mixture evaporates.

Preparation of the adhesive bond of composites:
- Lithium (di)silicate
- Veneering and press ceramics

Also suitable for silanization of surfaces.

Conditioning of oxide ceramic frameworks (zirconium oxide/aluminium oxide/spinel ceramic):
Sandblast the ceramic frameworks with 110 µm aluminium oxide at a maximum pressure of 2 bar or roughen with a diamond grinder. The framework must not be cleaned with a steam jet after sandblasting/grinding! Remove any impurities using alcohol and a clean brush. Then apply the appropriate primer and wait until it evaporates.

Preparation of the adhesive bond of composites:
- PMMA denture resins
- Composite (veneer composites/ composite teeth)
- High-performance polymers BioHPP
- PEEK/PEKK/PAEK

Conditioning of plastics (composite/PMMA materials/high-performance polymers such as BioHPP):
Sandblast the plastic/plastic framework with 110 µm grain aluminium oxide at a pressure of 2 to 3 bar. The framework must not be cleaned with a steam jet after sandblasting. Any impurities should be removed using alcohol and a clean brush. Then apply a thin coating of visio.link and cure for 90 seconds in a light polymerisation device (wavelength range 370 nm - 400 nm). The conditioned area should have a silk-matte finish after light curing. This shows that the layer thickness is perfect.

Sandblasting

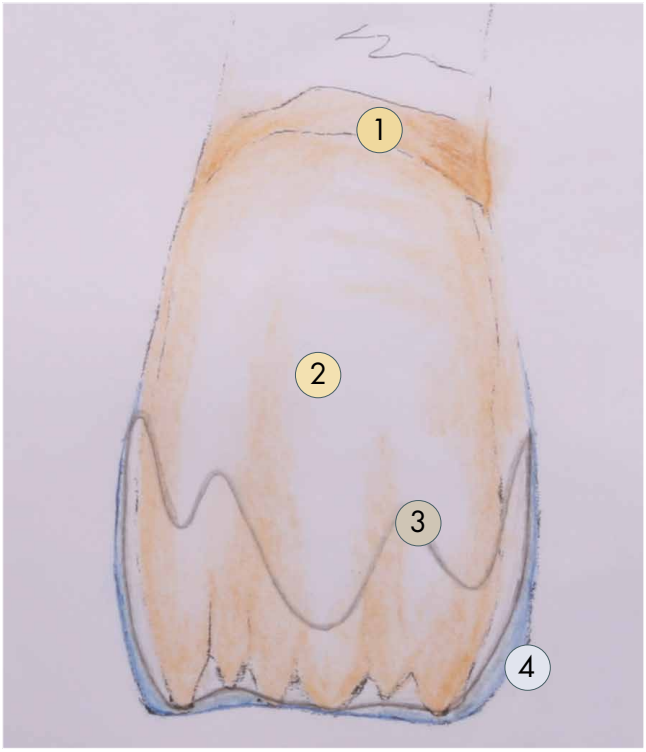
Light-curing time

Waiting time

Maximum layer thickness

2. Layering instructions / Customisation

Standard layering

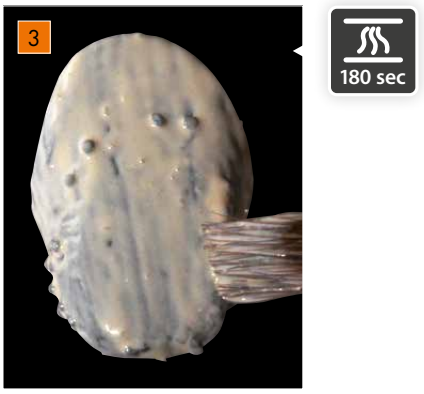


1. The neck of the tooth is coated with the dentine mass A3.5 or beige modifier – one degree darker than the subsequent tooth colour.
2. The body of the tooth and mamelons are coated with the dentine mass A3.
3. Almost the entire edge is built up with Enamel E2.
4. The form of the cutting edge is completed with Incisal opal.

Standard layering

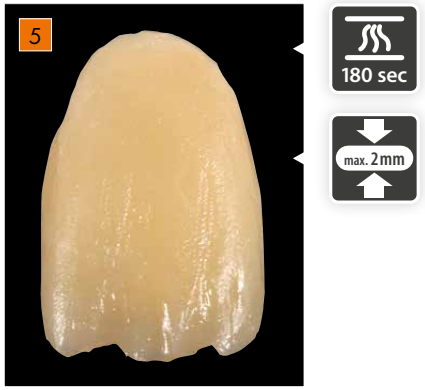
Sandblast the metal framework with a pressure of 3 to 4 bar with 110 µm aluminium oxide. Do not steam blast, and do not blast with compressed air.

Apply MKZ primer with a clean single-use brush and allow to evaporate.

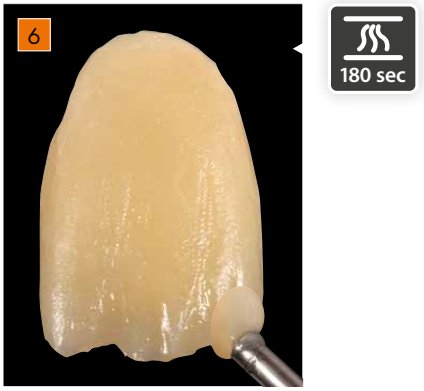


For mechanical retentions, the dual-hardening combo.lign opaquer should be applied as a first layer (wash opaquer).

Apply crea.lign opaquer.



The body of the tooth is coated with crea.lign paste A3, the neck of the tooth with A3.5.



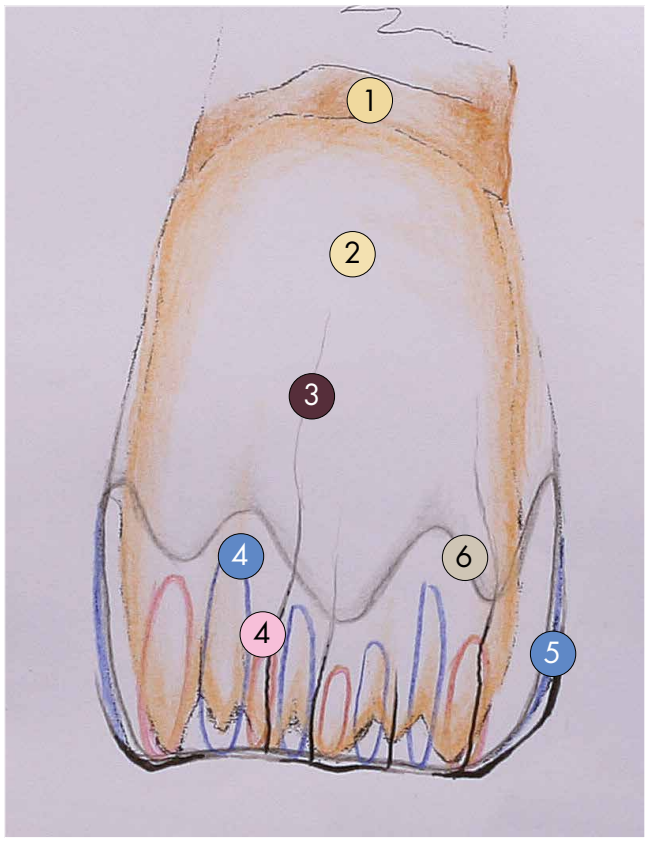
The edge is coated with Enamel E2.

Apply crea.lign Modelling Liquid to reduce the dispersion layer.
Remove the remaining dispersion layer with crea.lign surface cleaner.

The veneer finished and polished with the visio.lign Toolkit.

2. Layering instructions / Customisation

Customised layering



1 The neck of the tooth is coated with the dentine mass A3.5 or beige modifier – one degree darker than the subsequent tooth colour.

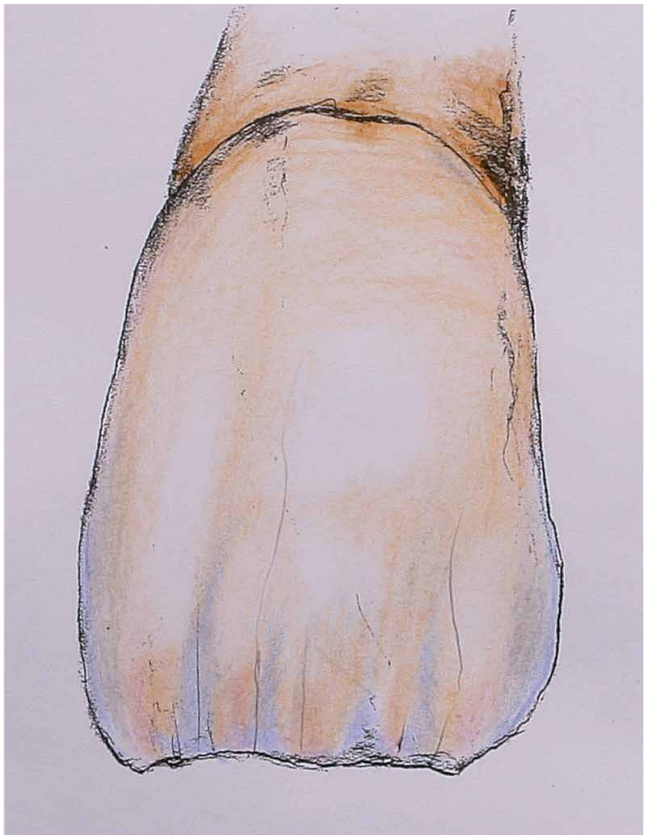
2 The body of the tooth and mamelons are coated with the dentine mass A3.

3 Add thin enamel cracks using visio.paint ebony.

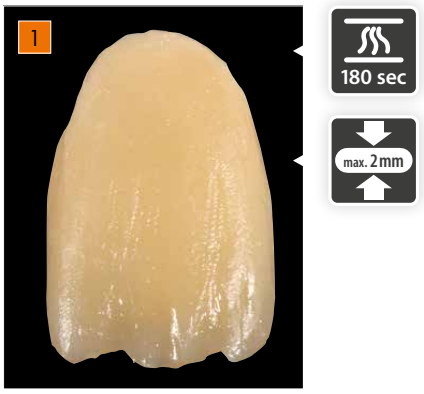
4 Place alternating layers of Incisal blue and Incisal rose over the mamelons.

5 Apply Incisal blue in a mesial and distal direction from the cutting edge.

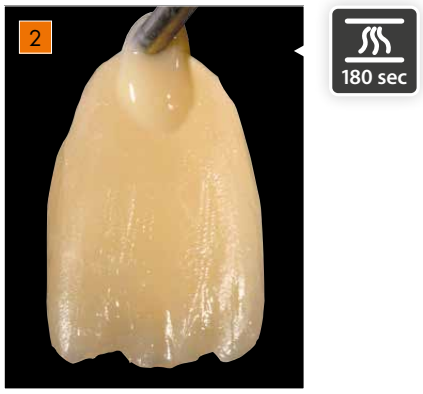
6 The entire edge is built up with Enamel E2.



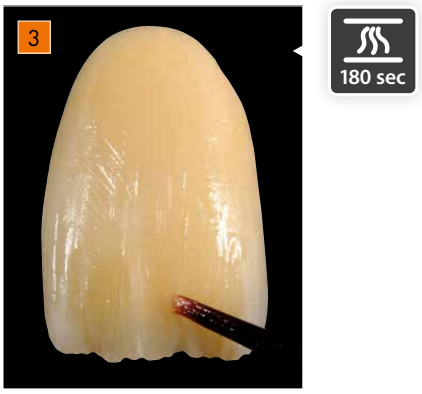
Customised layering



Coat the body of the tooth with crea.lign paste A3.



Coat the neck area with crea.lign A3.5.



Apply visio.paint for special effects, such as enamel cracks.

Coat with alternating layers of crea.lign Incisal blue and rose.

Incisal blue is applied in a mesial and distal direction.

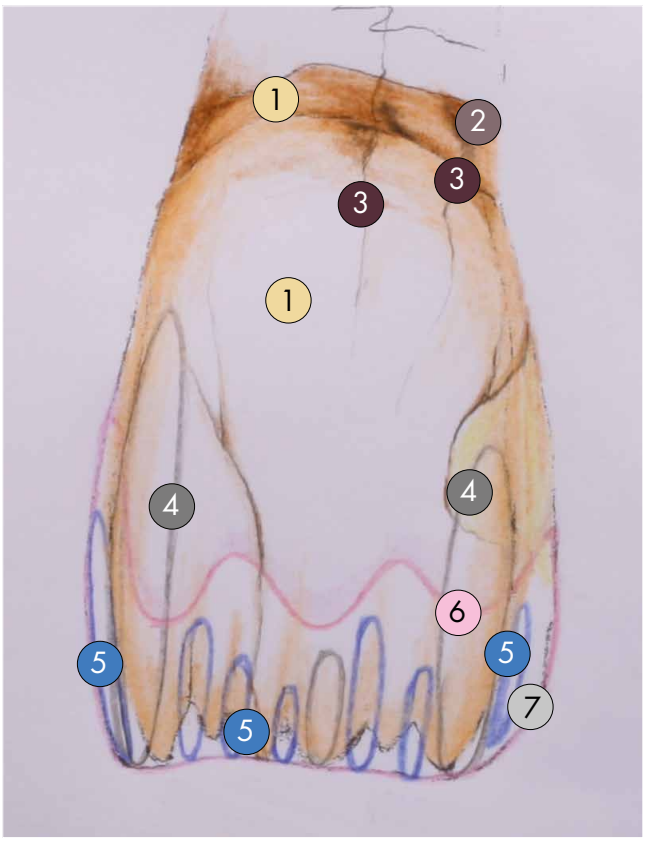
The cutting edge is completed with Enamel E2.

Apply crea.lign Modelling Liquid to reduce the dispersion layer and polymerise. Remove the remaining dispersion layer with crea.lign surface cleaner.

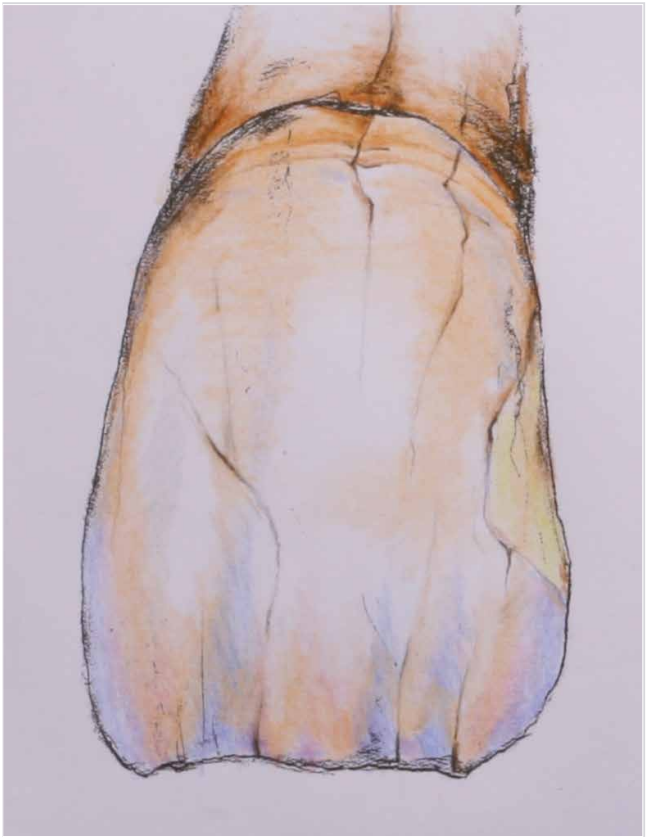
The veneer finished and polished with the visio.lign Toolkit.

2. Layering instructions / Customisation

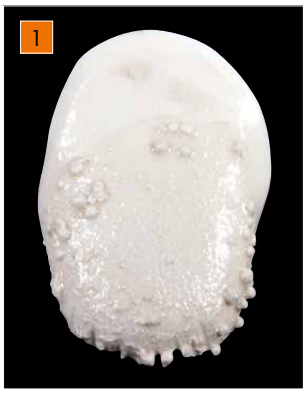
Pronounced customised layering



1. The neck of the tooth and the body of the tooth with mamelons are coated with the dentine mass A3.
2. Dark contrasts are ground into the neck area with orange Stains and brown Stains, which is also mixed with visio.paint ebony.
3. Add thin cracks using visio.paint ebony.
4. Marginal ridges are built up with Incisal universal.
5. Place Incisal blue over the mamelons and on the marginal ridges.
6. Complete the cutting edge area with Incisal rose.
7. Complete the marginal ridge with crea.lign Transpa Clear in a distal direction and laminate the veneer.



Pronounced customised layering

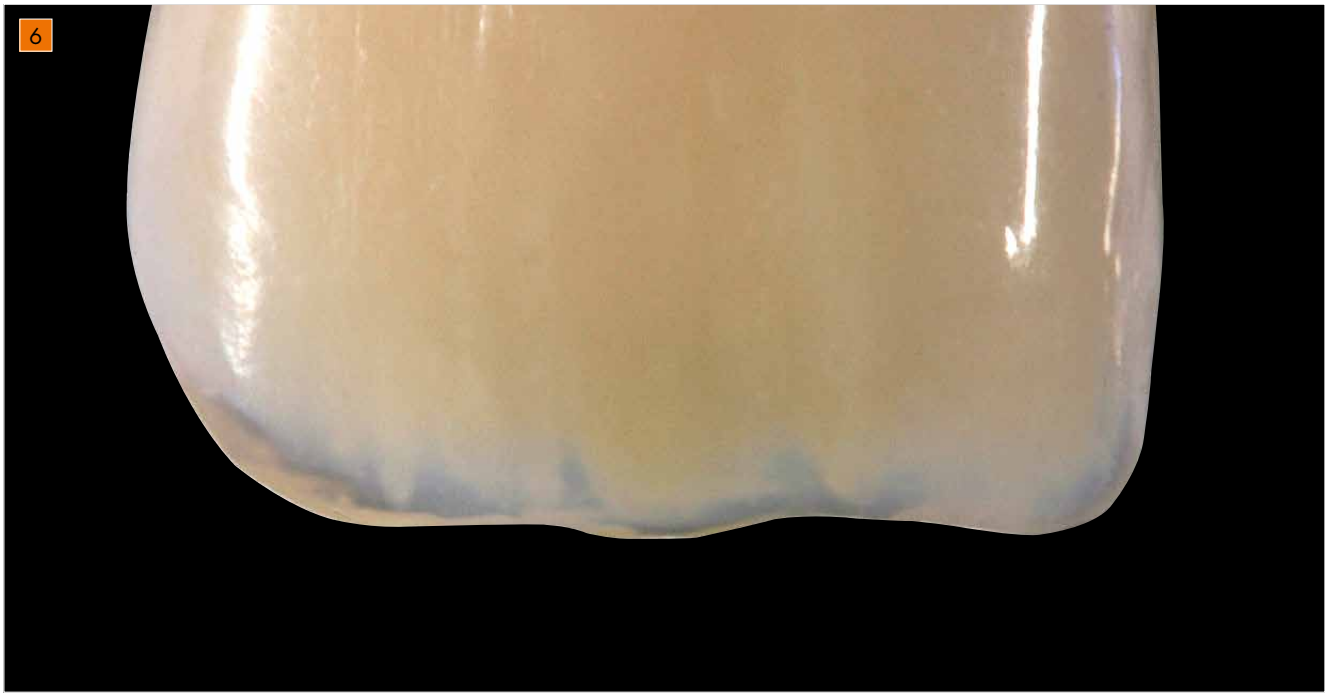


Wash opaquer, dual-hardening combo.lign opaquer on BioHPP copings.

11 BioHPP® copings, 21 NPM copings.

Wash opaquer, dual-hardening combo.lign opaquer on NPM copings.

No colour variation discernible, despite the use of different framework materials.

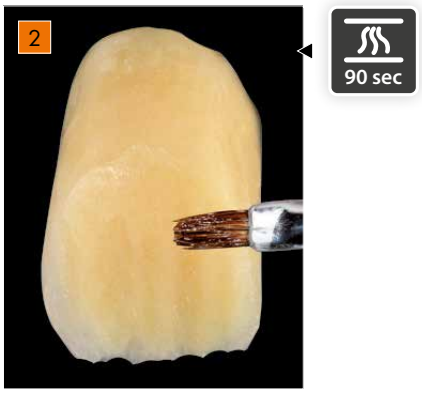


Natural aesthetics

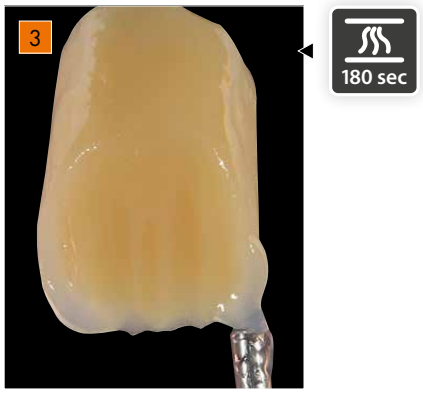
2. Layering instructions / Customisation

neo.lign plastic tooth

Abrade and sandblast the neo.lign full tooth down to the dentine.



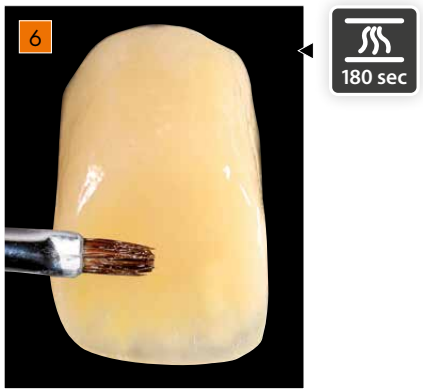
Then apply visio.link thinly and polymerise.



crea.lign Incisal blue is applied in a mesial and distal direction.

crea.lign Transpa emphasises the mamelons.

The incisal area is completed with crea.lign Enamel.



Apply crea.lign Modelling Liquid to reduce the dispersion layer and polymerise. Remove the remaining dispersion layer with crea.lign surface cleaner.

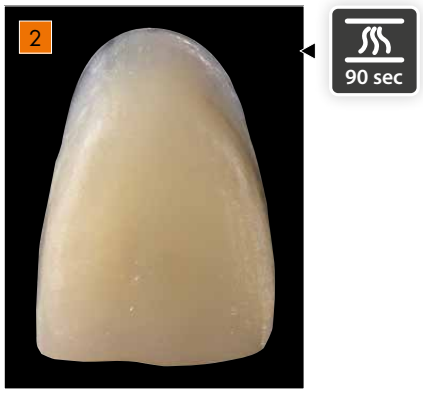
Plastic tooth finished and polished with the visio.lign Toolkit.

AFTER

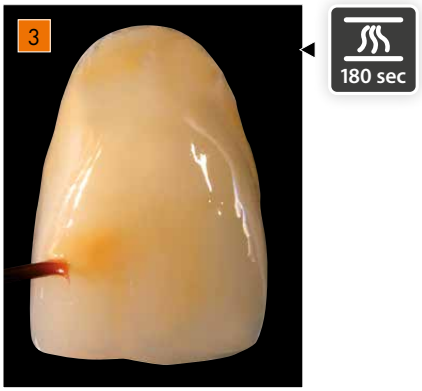
BEFORE

Milled plastic crown (monolithic)

Crown conditioned according to the instructions on p. 3.

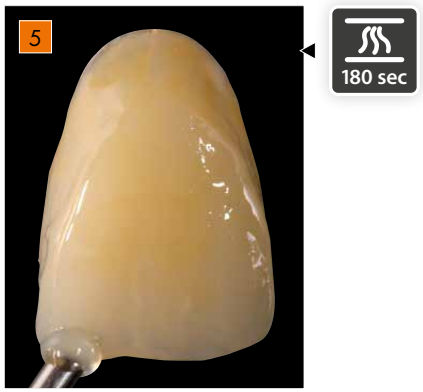


The crown is coated thinly with visio.link.



The crown is painted on the surface with visio.paint stains.

The visio.paint stains can be thinned with crea.lign Modelling Liquid, in order to create smooth transitions.



The crown is now covered with crea.lign Transpa Clear, in order to protect the paint from wear and plaque accretion.

Apply crea.lign Modelling Liquid to reduce the dispersion layer and polymerise. Remove the remaining dispersion layer with crea.lign surface cleaner.

The crown was finished and polished to a high gloss with the visio.lign Toolkit.

AFTER

BEFORE

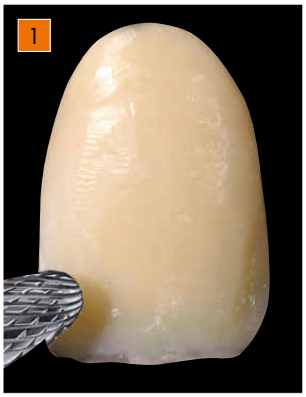
3. Corrections

Sandblast or roughen with coarse diamond, do not steam blast, do not blast with compressed air.

Apply visio.link thinly.

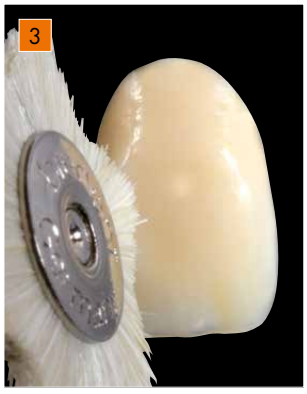
Apply crea.lign to correct the form of the tooth.

4. Processing with the visio.lign Toolkit



Process the surface with the mills from the visio.lign Toolkit.

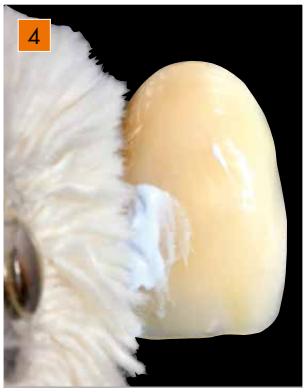
The transition to the framework material and the veneer is smoothed using the rubber lens.



Pre-polishing is carried out using a goat hair brush and Acrypol polishing paste.

Apply crea.lign Modelling Liquid to reduce the dispersion layer. Remove the remaining dispersion layer with crea.lign surface cleaner.

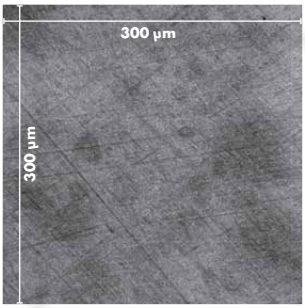
The veneer finished with the visio.lign Toolkit.



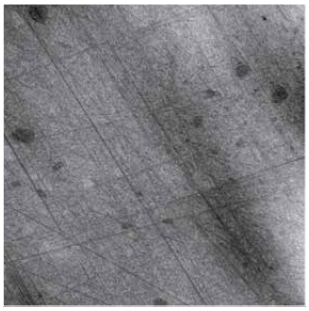
High-gloss polishing is carried out using a cotton buffing wheel and Abraso Starglanz.

SURFACE ROUGHNESS

Thanks to the visio.lign Toolkit and the polishing strategy outlined above, surface roughnesses of the crea.lign composite of only 0.024 µm (Ra value of crea.lign) and 0.030 µm (Ra value of crea.lign paste) can be achieved.



crea.lign gel 0,024 µm



crea.lign paste 0,030 µm

5. Red-white-customisation layering instructions

Layering instructions crea.lign Gel GUM

The bone is represented with beige.

The effect of depth is achieved with lila. Lila is spread from the mucolabial fold towards the teeth.

The layers that were previously applied are coated with pink.

The alveolar sockets are accentuated with rose.

Well perfused areas are accentuated with red.

Light is applied to the gingival margin.

The entire surface is sealed with transpa.

Layering instructions crea.lign Paste GUM

Use Paste PO to contour the marginal area.

The alveolar sockets are built up with Paste PL.

Use light to apply the gingival margin.

The effect of depth is achieved with lila.

Well perfused areas are accentuated with red.

The entire surface is sealed with transpa.

6. Polymerisation times and equipment

6.1 bre.Lux PowerUnit 2

Manufacturer	Product name	bre.Lux PowerUnit 2 curing times in seconds [s] / Luminous power in percent [%]				
		bre.Lux LED N2 (hand lamp)		bre.Lux PowerUnit2 (basic unit)		
		Partial polymerisation (fixation/ partial curing)	**Intermediate polymerisation** (intermediate curing of individual layers)	**Partial polymerisation** (fixation/ partial curing)	**Intermediate polymerisation** (intermediate curing of individual layers)	**Final polymerisation** (final end hardness of material)
bredent	visio.link	N/A	30 s	N/A	90 s	90 s
	combo.lign bonding composite	30 s	N/A	20 s / 50 % (iProg)	180 s	180 s
	crea.lign gel	15 s	15 s	20 s / 50 % (iProg)	180 s	360 s
	crea.lign paste	15 s	15 s	20 s / 50 % (iProg)	180 s	360 s
	combo.lign Opaker	N/A	N/A	N/A	180 s	360 s
	crea.lign Opaker	N/A	N/A	N/A	180 s	360 s
	visio.paint	N/A	N/A	N/A	180 s	360 s
	crea.lign Stains	N/A	N/A	N/A	180 s	360 s
	Ropak UV	N/A	N/A	N/A	180 s **	360 s
	Ropak Compact opaquer UV	N/A	N/A	N/A	180 s **	360 s
	Ropak Compact opaquer tooth-coloured UV	N/A	N/A	N/A	180 s	360 s
	compoForm UV	15 s	N/A	20 s / 50 % (iProg)	90 s	180 s
	Tray material UV	N/A	N/A	40 s / 50 % (iProg)	90 s	180 s (1)
	Die varnish, light-curing	N/A	30 s *	20 s / 50 % (iProg)	90 s	180 s
	SERACOLL UV	N/A	15 s	N/A	20 s / 50 % (iProg)	40 s / 50 % (iProg)
	Qu-connector	N/A	30 s	N/A	90 s	90 s
Heraeus	Signum	N/A	N/A	20 s / 50 % (iProg)	180 s	360 s
	Palatray XL	N/A	N/A	40 s / 50 % (iProg)	90 s	360 s
Shofu	Solidex	N/A	N/A	20 s / 50 % (iProg)	180 s	360 s
GC	Gradia	15 s	N/A	20 s / 50 % (iProg)	180 s	360 s
Wegold	S-Lay	N/A	N/A	20 s / 50 % (iProg)	180 s	360 s
VITA	VITA **VM LC** PRE OPAQUE / VITA **VM LC** OPAQUE PASTE	N/A	N/A	N/A	N/A	180 s
	VITA V**M LC** OPAQUE Pulver	N/A	N/A	N/A	360 s	360 s
	VITA **VM LC** Composite	30 s	N/A	40 s / 50 % (iProg)	180 s	360 s (2)
Degudent	Degudent in:joy	N/A	N/A	20 s / 50 % (iProg)	180 s	360 s

Notes:

*	In case of one order only.
**	Only apply opaquer in two coats.
(1)	For UV tray material, upper and lower side each 1 x 180 s.
(2)	For pontics, layer thickness up to max. 2 mm.
(iProg)	Individual programming necessary: See new parameters, including the bonding of prefabricated wax parts. Please create an individual programme with 50% luminous power without step function (heat reduction!)
N/A	Not applicable.

The polymerisation times are guide values for intact devices.
Individual programmes: Metal frameworks store the thermal energy of light more than pure polymers. Heat can have a positive effect on materials in the form of post-treatment or, in the case of too much heat, can lead to embrittlement or stresses. The development of heat can be conveniently controlled by the user by automatically adapting the stored (default) programs to the desired material conditions. For metal-free restorations or constructions with material thicknesses of more than 2mm, the option up to 100% power "Red. Power off" is recommended. For restorations that include metal components or involve high material shrinkage, it is recommended to reduce the light power: "Red. Power on". However, raising the power to 100% is always possible in the individual programs without having to re-adjust the unit.
In some cases, the curing times may change proportionally.

The hand lamp can be used as an alternative to the bre.Lux PowerUnit 2 for partial or intermediate polymerisation. The final curing is always done using the bre.Lux PowerUnit 2!

7.2 Shade combination tables

crea.lign gel/paste*	Traditional A - D shades															
Enamel	A1	A2	A3	A3.5	A4	B1	B2	B3	B4	C1	C2	C3	C4	D2	D3	D4	BL3
E1	■					■				■				■			■
E2		■	■				■										
E3				■				■	■		■	■			■	■	
E4					■								■				

* All crea.lign Gel compounds can be seamlessly combined with all crea.lign Paste compounds.

6.2 Other suitable light polymerisation devices

Polymerisation times for the visio.lign system components visio.link, combo.lign and crea.lign

Manufacturer	Product name	Wavelength [nm] *	Polymerisation times in seconds [s]		
			visio.link	combo.lign	crea.lign / crea.lign - Opaker / combo.lign - Opaker
bredent	bre.Lux PowerUnit 2	370 - 500 nm	90 s	180 s	360 s
Dentsply	Triad 2000	400 - 500 nm	180 s	360 s	600 s
Degudent	Eclipse	k.A.	60 s	180 s	360 s
Heraeus Kulzer	Dentacolor XS, Uni XS, Heraflash	320 - 520 nm	90 s	180 s	360 s
GC	Labolight LV-III	380 - 490 nm	120 s	300 s	600 s
Ivoclar Vivadent	Targes Power Ofen, Luminat 100	400 - 580 nm	240 s	180 s	480 s
Schütz Dental	Spektra 200	310 - 500 nm	120 s	180 s	360 s
Shofu Dental	Solidilite	400 - 500 nm	90 s	180 s	360 s
Kuraray Dental	CS 110	k.A.	120 s	300 s	480 s
Hager & Werken	Speed Labolight	320 - 550 nm	90 s	180 s	480 s
3M ESPE	Visio Beta neu: P1 - P4 alt: U0 - U3	400 - 500 nm	> 240 s (P2) 420 s (U1, U3)	420 s (P2) 900 s (U0)	900 s (P1) 900 s (U0)

Notes: * Manufacturer's data
n/a No information

7. Layer thickness and shade combination tables

7.1 Polymerisation times for specific layer thicknesses

Material	max. layer thickness [mm]	bre.Lux PowerUnit 2 polymerisation times in seconds [s]	
		Intermediate polymerisation (intermediate curing of individual layers)	Final polymerisation (final end hardness of material)
crea.lign Enamel	1 mm	180 s	360 s
crea.lign Incisal	1 mm	180 s	360 s
crea.lign Transpa clear	1 mm	180 s	360 s
crea.lign Dentin	1 mm	180 s	360 s
crea.lign Modifier	1 mm	180 s	360 s
crea.lign GUM	1 mm	180 s	360 s
crea.lign Stains	0,3 mm	180 s	360 s
visio.paint	0,1 mm	180 s	360 s
30% visio.paint mixed with crea.lign	0,3 mm	180 s	360 s
crea.lign paste	2 mm	180 s	360 s
combo.lign	2 mm	180 s	180 s
crea.lign Opaker	0,1 mm	180 s	360 s
combo.lign Opaker	0,1 mm	180 s	180 s

crea.lign Opaker system shades	1	2	3	4	5	6	7	8	9	GUM
shades	A1 / B2	A2	A3	B1 / C1 / BL3	C2 / C3 / D2 / D4	B3 / B4	A3.5	A4 / C4	D3	Gingiva shades

The transparent crea.lign opaquer is suitable for pre-coloured frameworks, e.g. zirconia.

combo.lign Opaker system shades	light	medium	intensiv	GUM
shades	A1 - A3 / B1 - B2 / C1 - C2	A3.5 / B3 - B4 / D2 - D3	A4 / C3 - C4 / D4	Gingiva shades

bre.Lux PowerUnit 2

Full Range System

bre.Lux PowerUnit 2 Basic unit

bre.Lux LED N2

hand lamp with FlexHolder

Advantages

Reliable polymerisation

- all light waves available
  = maximum penetration
  = top quality

Unsurpassed polymerisation speed

- 72 lights + full range +
  rotary plate + Light-Tray

Reliability

- Careful and gradual increase of luminous power
- Temperature control 45°-55° C - up to 65°C possible for individually adjustable programs
- Overheat protection
- Automatic deactivation of the light with acoustic signal at the end of the program

Long service life of the LED lights

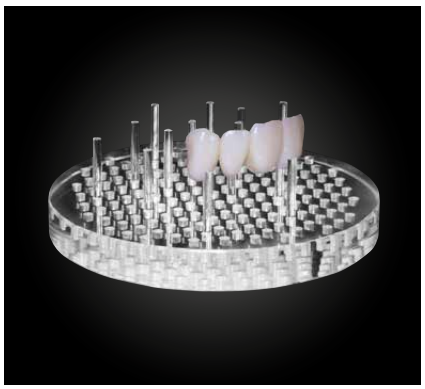
- 20,000 operating hours or 12 years

Ease of use

- Easy and fast access to programs
- Programmable to satisfy individual requirements
- Spacious drawer
- Compact and extremely silent unit

Technical data bre.Lux PowerUnit 2

Basic unit	
U	100 – 240 VAC
P	130 W
Frq	50 / 60 Hz
Fuse	T 2.0 A
Light range	370 – 500 nm



Technical data hand lamp

hand lamp	
U	5 VAC
P	5 W
Light range	370 – 500 nm

Plug-in power unit - hand lamp	
U	100 – 240 VAC
P	max. 15 W
Frq	50 / 60 Hz
Output	5 V / 3 A

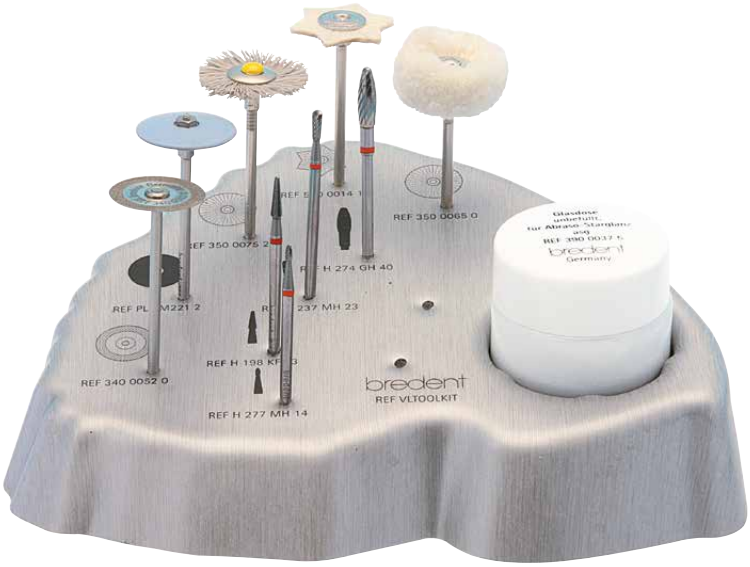
"Unleash the power of light"
more about bre.Lux PowerUnit 2

Free download at www.bredent.com or request by calling
+49 (0) 7309 / 872 - 441 **REF 000590GB**

→ *bre.Lux polymerisation times see pages 16/17*

visio.lign Toolkit

For veneers with permanent plaque resistance and shade stability



→ *Tool stand is also available without tools (empty) REF VL1 Shell*

The "Finishing Touch"

The visio.lign Toolkit has been designed specifically for the finishing of composites, such as visio.lign veneers, and provides instruments and polishing pastes for a perfect finish.

Composite finishing set
more about the visio.lign Toolkit

Free download at www.visio-lign.com or request by calling
+49 (0) 7309 / 872 - 441 **REF 000427GB**

Composite surfaces like ceramics

The combination of the materials of the visio.lign veneering system and the visio.lign Toolkit results in a surface featuring plaque resistance and shade stability, and its quality and resistance is identical to that of a ceramic material.

Benefits

of the visio.lign Toolkit

- Burs with relief produce smooth surfaces and reduce polishing time
- Prepolishing and high luster polishing pastes are included in the set
- Tools are arranged at different heights to ensure easy access and grasp
- Removable glass pots to avoid drying out of high luster polishing paste
- Pictograms and reference numbers are printed on the tools and stand for better visual control
- Three empty spaces for additional tools

crea.lign

Veneering composite

create natural beauty

bredent group

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