

**PALA®**

## Instructions for use

PalaVeneer® and PalaVeneer® Dentine



Giving a hand to oral health.



# Step by Step guide for the PalaVeneer® System –

More room for perfect results.

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### Legend

 <b>10 sec.</b> Holding time (e.g. 10 sec.)	 <b>90 sec.</b> Polymerisation with HiLite power (e.g. 90 sec.)
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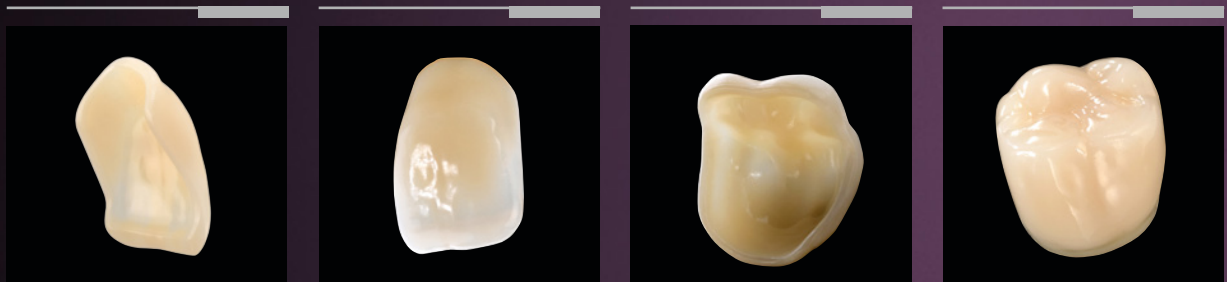
## 01 PalaVeneer – the System.

PalaVeneer is a multi-layered veneer shell system based on Pala Premium and Idealis teeth. The veneer shells are attached with the PalaVeneer Dentine, a PMMA-based powder and liquid system, which is coloured to match the PalaVeneer veneer shells.

### The PalaVeneer system offers:

- Maximum attainable overall aesthetic in limited spaces and functionally difficult cases.
- Thin shells, reduced fissure depth and an extended cervical area.
- Can be combined with all Pala tooth lines and PalaVeneer shells in the Pala Mix & Match concept.
- Absolute trueness to shade, form and function.
- Tooth material with NanoPearls® for the highest abrasion stability and fracture resistance.
- Pala Veneer Dentine available in all 16 A–D shades.

This guide will take you through how to use PalaVeneer, PalaVeneer Dentine and Pala cre-active and assist you with helpful tips for your daily work.



### Indications:

- For fixed and removable dental restorations.

### Applications:

- Telescope work.
- Implant structures (backward planning).
- Model cast prosthetics.
- Cover dentures.
- Aesthetic try-ons.
- Laboratory-fabricated provisional restoration.
- CAD/CAM bridges and bars.

You save time as there is no need for time-consuming grinding of full-contour teeth or individual veneerings. Thanks to their reduced thickness, the PalaVeneers can be prepared without time-consuming processing.

## PalaVeneer – more room for perfect results.

The thin veneer shell gives the maximum attainable overall aesthetic, even if space is limited or in functional difficult cases. This makes it possible for the technician to achieve highly aesthetic and Premium-identical layering in the anterior region.

The PalaVeneer veneer shells can be combined with all Pala tooth lines in the Pala Mix & Match concept. PalaVeneer represent absolute trueness to shade, form and function. The tooth material NanoPearls® makes PalaVeneer particularly wear-resistant and fracture-resistant.

### Pala – That's prosthetics

#### PalaVeneers – Veneer shells

Anteriors based on: Premium 6  
Posteriors based on: Idealis 8

#### Pala Mix & Match

PalaVeneer can be combined with all Pala tooth lines in the Pala Mix & Match concept.



#### Palabond

Safe bonding between PalaVeneer Dentine and PalaVeneer/Pala Mix & Match teeth.



#### PalaVeneer Dentine

PMMA-based powder and liquid system, shade blended to match the PalaVeneer veneer shells.



#### Signum opaque F

Light-curing fluorescent opaque to colour-mask framework structures.



#### Signum metal bond

Adhesive bond between alloy and light-curing opaque.



#### Pala cre-active and Signum cre-active

Individualisation sets enable you to make your work unique, for highly customised dental restorations.













#### Accessories

Pala Lab Putty: 1 : 1 pliable putty in Shore A hardness 65 & 90.  
Flexitime correct flow: low viscosity impression silicone for excellent detail impressions.  
Aislar: Alginate separating liquid with fast drying time and smooth surface rendition.













## 02 Pala Mix & Match – Combination chart.

### Combination of PalaVeneer and Premium 6

	PalaVeneer 6	Premium 6	PalaVeneer 6	Premium 6	PalaVeneer 8	Premium 8	Mondial 8	Idealis 8
								
	O2 O4 O6	O2 O4 O6	L36 L36, L38 L38, L40	L12, L14 L16, L18, L19 L20, L22, L19	33 35 37	XS/XSL + S/SL S/SL + M/ML L/LL	31, 33 35 37	31, 33 35 37
	R4 R6 R8	R2 R4 R6 R8	L36, L38 L38, L40 L40	L12 L14, L16 L18, L19 L24, L22	33, 35 35, 37 37	XS/XSL + S/SL S/SL + M/ML M/ML + L/LL L/LL	31, 33 33, 35 35, 37 37	31, 33 33, 35 35, 37 37
	S4 S6 S8	S2 S4 S6 S8	L36, L38 L38, L40 L40	L14, L16 L18, L19 L20, L22 L24, L22	33, 35 37 37	XS/XSL + S/SL M/ML L/LL L/LL	31, 33 33, 35 37 37	31, 33 33, 35 37 37
		T2 T4 T6	L36 L36 L38	L14 L16, L19 L18, L19	33 33, 35 35	XS/XSL + S/SL S/SL + M/ML L/LL	31, 33 33, 35 35	31, 33 33, 35 35

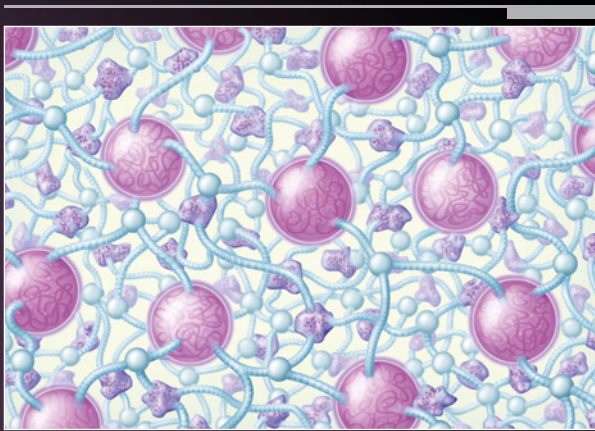
### Combination of Mondial 6 with PalaVeneer 8

	Mondial 6	Mondial 6	PalaVeneer 8	Premium 8	Mondial 8	Idealis 8
						
	O444 O457 O510 O525	L341, L373, L369 L369, L362 L384, L398 L398	33 35 37 37	S/SL S/SL + M/ML L/LL L/LL	33 35 37 37	33 35 37 37
	R410 R420 R449 R455 R483	L331, L341 L331, L341 L362, L369, L373 L362, L369 L378, L382	– 33 33, 35 33, 35 35, 37	XS/XSL XS/XSL + S/SL M/ML M/ML M/ML + L/LL	29, 31 31, 33 33, 35 33, 35 35, 37	31 31, 33 33, 35 33, 35 35, 37
	S443 S445 S453	L373, L369 L341, L369 L373, L362	33 33 33	S/SL S/SL S/SL	33 33 33	33 33 33
	T405 T442 T450 T465 T477 T515	L315 L331, L341, L362 L341, L369 L362, L378 L382, L378 L384	– 33 33 35 35 35, 37	– XS/XSL + S/SL S/SL M/ML M/ML L/LL	29 31, 33 33 35 35 35, 37	– 31, 33 33 35 35 35, 37



The high quality of our Pala Premium, Pala Mondial, Pala Idealis denture teeth and our PalaVeneer veneer shells is based on modern fabrication methods and the use of particularly high quality materials. These are developed and manufactured by Heraeus Kulzer in Germany: Every Pala Mix & Match denture tooth and veneer shell used worldwide, comes from the Pala Production Plant at Wasserburg near Lake Constance.

## NanoPearls® – for highest abrasion and fracture resistance



- The patented NanoPearls material is comprised of unique hybrid-fillers combined with a tough-elastic matrix.
- The result: high abrasion resistance, natural opalescence and surface quality coupled with high fracture resistance and longevity.
- 100 % colour stable materials for lasting colour stability.



Organic filler with diffusion zone to the matrix

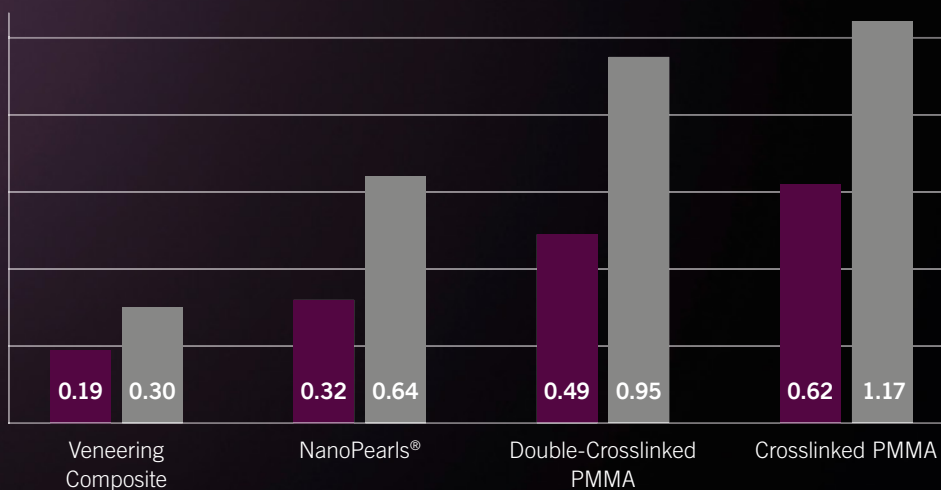


Silan modified nanofillers in tough-elastic matrix



Highly crosslinked tough-elastic matrix

## Wear Comparison of Denture Teeth Materials 3-Body-Wear-Test based on ACTA-method, Amsterdam

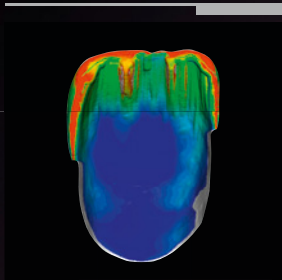


Source: Heraeus Kulzer, F&E Wehrheim

Volume loss mm³  
150 thousand cycles

Volume loss mm³  
300 thousand cycles

We have integrated the tried and trusted NanoPearls Material into our PalaVeneer Dentine to match our bonding material perfectly to our tooth material, ensuring a perfect match between the two in terms of shade, polishing characteristics and adhesive bond.



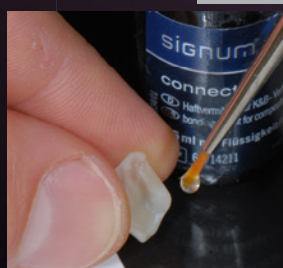
Compressed  
Premium-Layering

### Layering.

Thinner layers can be achieved with PalaVeneer by compressing the tried and tested Premium layering (image above). This has resulted in layers under 1 mm in thickness, with the desired aesthetic effect of depth. The minimal layer thickness allows better overall aesthetic results.



The interaction with other components is matched, efficient, tested and has stood the test of time.





### 03 PalaVeneer – Selection and adjustment.

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Modelling the framework according to functional, aesthetic and phonetic criteria. We recommend the use of retention pearls.

Selecting the suitable PalaVeneer veneer shells and if necessary Pala Mix & Match teeth.



Adapt the PalaVeneer to the metal structure. (Shorten if necessary, reduce approximal parts, partially grind out).

### 03 PalaVeneer – Set up and casting.

Adapt the PalaVeneer veneer shells with tooth coloured wax to the metal structure



Handy Tip: For a precise impression adapt flowable silicone, e.g. Flexitime correct flow, around the teeth



### 03 PalaVeneer – Set up and casting.

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Followed by adaptation of  
Lab Putty material (e.g. Pala  
Lab Putty 90).



Trim the periphery for  
precise fitting.

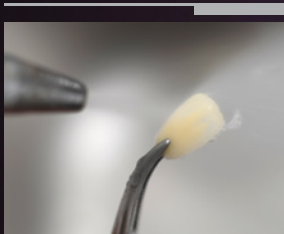
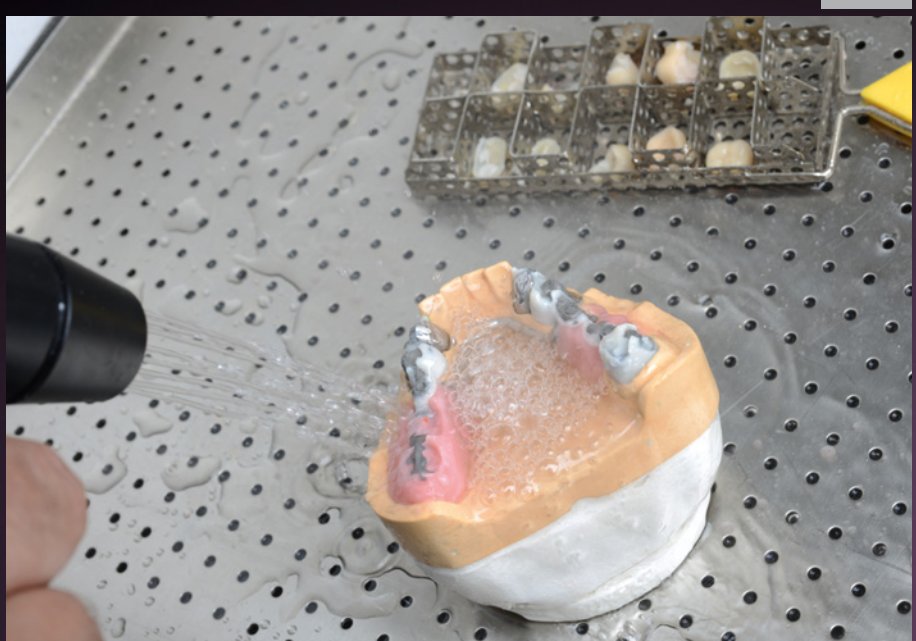


## 04 PalaVeneer –

Preparation of metal structure and PalaVeneer.



Remove all wax from teeth, PalaVeneers and metal structures with hot water.



Use a steam device to clean teeth, PalaVeneers and metal structures





## 04 PalaVeneer –

Preparation of metal structure and PalaVeneer.

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Carefully sandblast  
PalaVeneers and teeth  
with 110–125  $\mu\text{m}$  Al<sub>2</sub>O<sub>3</sub>  
at 2 bar pressure



Sandblast metal structures  
with 110–125  $\mu\text{m}$  Al<sub>2</sub>O<sub>3</sub> at  
3 bar pressure

## 04 PalaVeneer –

Surface conditioning and opaque.



10 sec.



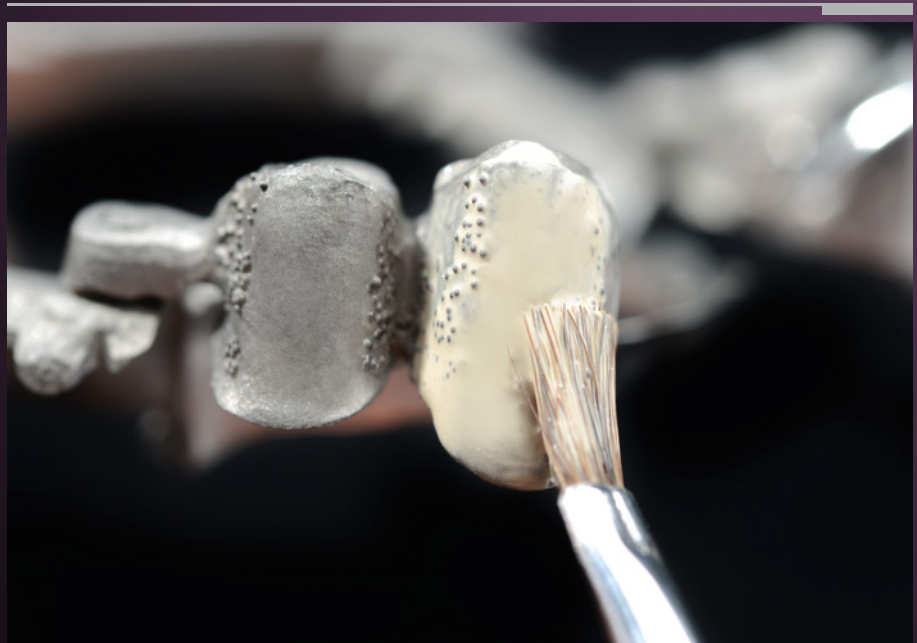
Remove dust and keep metal surface dry!  
Apply **Signum metal bond I** with a fine brush and allow to air dry.



90 sec.



Vigorously shake **Signum metal bond II** and apply 1–2 uniform layers.  
Light cure 90 sec. in a suitable light curing unit (e.g. HiLite power).



## 04 PalaVeneer –

Surface conditioning and opaque.

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**90 sec.**

Apply **Signum opaque F** in several thin layers and polymerise each layer individually.



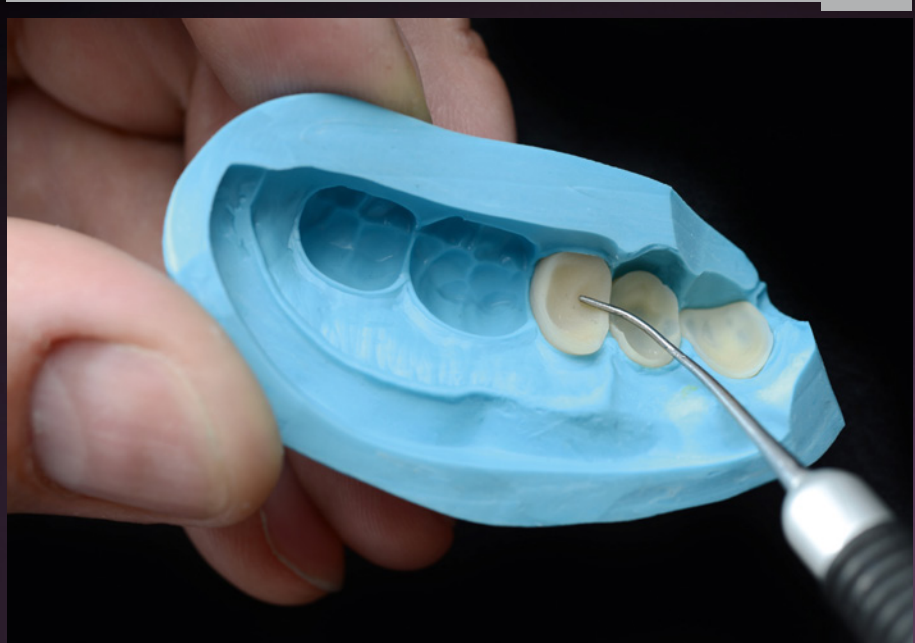
Isolate the gypsum with 2 thin coats of Aislar. For a perfect result, let each layer dry separately.



## 05 PalaVeneer – Preparation of PalaVeneer.



Handy Tip: Bond Teeth and PalaVeneers into the putty matrix using a small drop of adhesive.



Apply two coats of Palabond with a brush. The second application of the adhesive will remain active for 10 min.

It is recommended that Palabond is applied slightly beyond the sand-blasted surface.





## 06 PalaVeneer Dentine – Application press technology.

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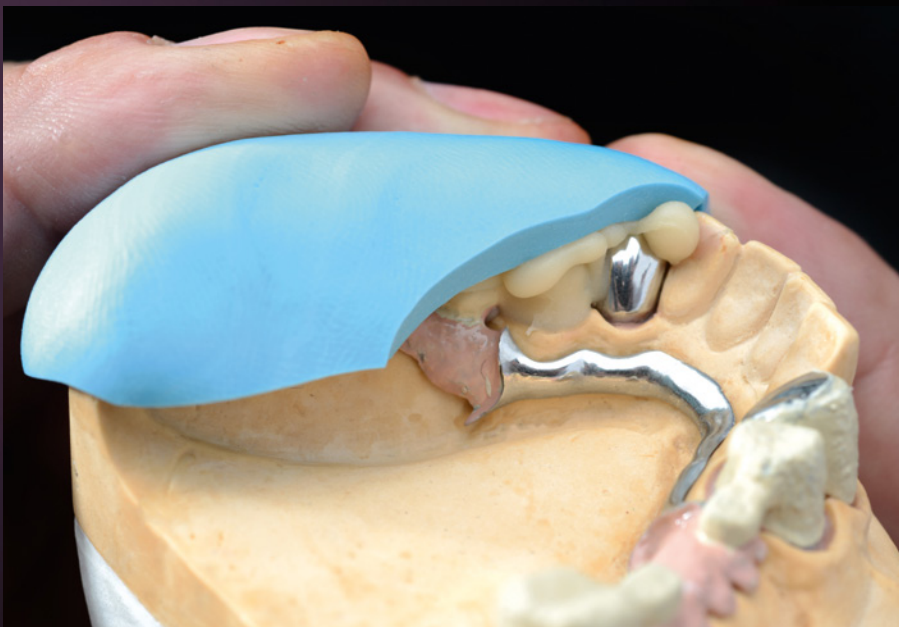


**30 sec.**



Pre-press technique

Mix PalaVeneer Dentine at a ratio of 1.8 g powder and 1 g liquid for 30 sec. and apply into the cast.



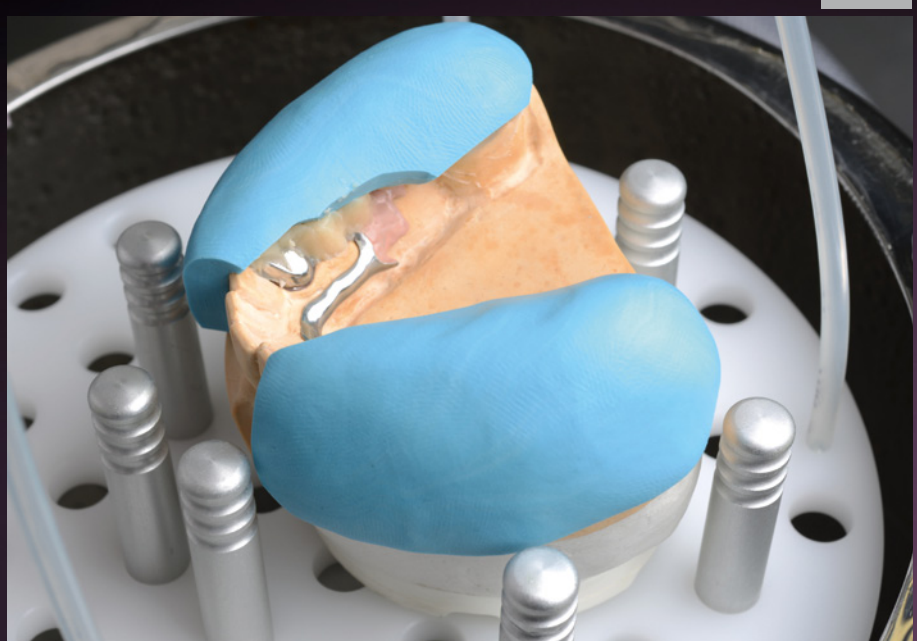
Place PalaVeneer Dentine into the Putty Matrix. Press the matrix onto the model. Remove any excess and model the palatal/lingual surfaces.

## 06 PalaVeneer Dentine – Polymerisation.



20 min.

Polymerise PalaVeneer Dentine for 20 min at 55 °C and 2 bar pressure, e. g. in the Palamat elite.



Mix denture acrylic as instructed by the manufacturer and pour and polymerise using casting technology.



## 06 PalaVeneer Dentine – Finishing and polishing.

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PalaVeneer Dentine can be finished with any tools you are usually working with.



Pre-polish with pumice.  
Polish with high gloss  
polishing compound.



## 07 PalaVeneer Dentine – Processing.



Final result.

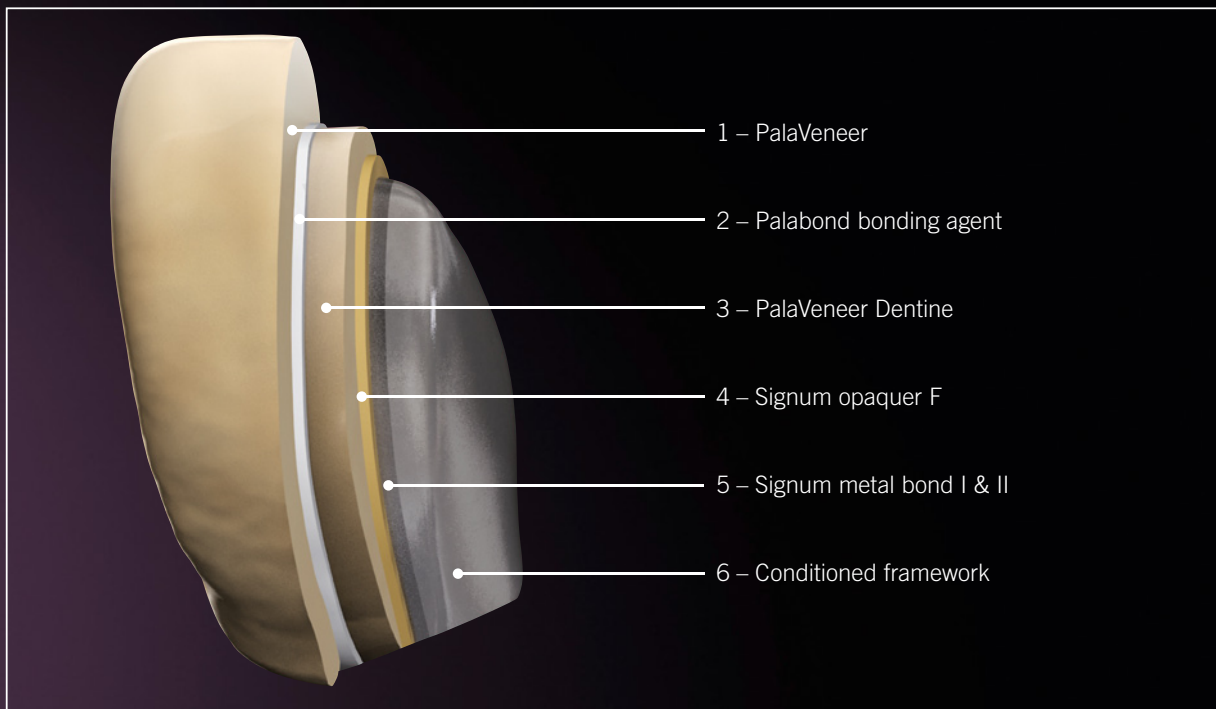




## 08 PalaVeneer – Layering.

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The System at a glance:



### Layering

The PalaVeneer system draws on tried-and-tested components from the Signum and Pala segments, which offers you excellent bonding characteristics for the veneer system.

## 09 PalaVeneer – Assortment.



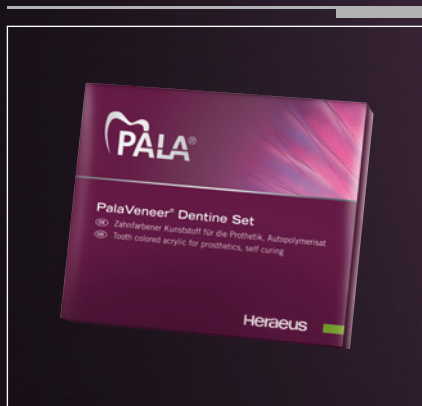
Delivery form	Art. Code
1 x Set	66057633

### PalaVeneer Test Set A3

Would you like to get to know the PalaVeneer Set?

The following PalaVeneer Test Set in A3 has everything you need to be able to start working with the veneers.

It has 28 full teeth (Premium and Idealis) and 28 PalaVeneer veneer shells, the bonding material in A3, the opaque and all bonds and accessories to get your started up now.



Delivery form	Art. Code
1 x Set	66057634

### PalaVeneer Dentine Set (6 shades)

Are you impressed by the advantages of PalaVeneer?

Then we have just what you need. We have put the most common shades together in the PalaVeneer Dentine Set. It includes shades A2, A3, A3,5, A4, B3, D3, and Palabond and a sample of Signum metal bond.

### Pala Lab Putty

This high definition laboratory A-silicone putty material was especially designed for accurate and fast working in dental laboratories. The easy 1:1 mixing guarantees high fitting accuracy and exact reproduction of details.

Pala Lab Putty can be used in a variety of applications, especially when working with PalaVeneers.

Pala Lab Putty is available in two different Shore A hardnesses with Pala Lab Putty 65 and Pala Lab Putty 90.

#### Advantages

- Easy to Mix in 1:1 ratio.
- Fast setting time (6:00 min).
- High reproduction of details (20 µm).
- Good tear resistance.
- Dimensionally stable over time (< 0,05 % after 24 h).
- Resistant to standard polymerisation temperatures.
- Simple dosing with included spoons.

#### Application

- Matrix for fabrication of hybrid over dentures.
- Matrix for construction of provisional.
- Matrix for setting anterior teeth in an immediate denture.
- Matrix for construction of bars.
- Matrix for processing teeth on a partial denture.
- Duplicating models.
- Creating preparation models for the repair.
- Insulation of teeth against plaster.



Delivery form	Art. Code
Pala Lab Putty 90	
3 kg (2 x 1.5 kg)	66057432
10 kg (2 x 5 kg)	66057433

Delivery form	Art. Code
Pala Lab Putty 65	
2,6 kg (2 x 1.3 kg)	66057434
9 kg (2 x 4.5 kg)	66057435

### Flexitime Correct Flow

For high precision impressions we recommend Flexitime Correct Flow.

The low viscosity Flexitime Correct Flow is applied around the teeth and then an impression is taken with the Pala Lab Putty. This gives a detailed and secure impression.



Delivery form	Art. Code
Flexitime Correct Flow	66002186
6 x (2 x 50 ml)	
12 Mixing Tips	

## 10 PalaVeneer Dentine – Accessories.



Delivery form	Art. Code
1 x 80 ml Flasche	64708055
1 x 500 ml Flasche	64708057
2 x 1.000 ml Flasche	64708058

### Aislar

**Good isolation is fundamental to well fitting prosthetic work.**

Aislar is a formaldehyde-free aqueous solution based on alginate used to isolate gypsum surfaces from prosthetic acrylics and composites.

The isolation must meet various demands, such as quick drying time, smooth surface and complete separation.

Aislar features these properties both in heat-curing and coldcuring prosthetic acrylics.

**Advantages**

- Dentures with maximum fitting accuracy.
- Smooth surfaces.
- Trimming reduced to a minimum.
- Short drying time, no layers formed.
- Optimal separation.
- Non-reactive secure polymerisation on all surfaces.
- Formaldehyde free.



Delivery form	Art. Code
1 x 45 ml	64708082

### Palabond

Secure bonding agent for use between denture material and acrylic teeth. Consistent use of the transparent bonding agent Palabond makes prosthetic teeth that fall out a thing of the past. It not only increases the bonding between the teeth and the denture base but also improves the bonding between repairs and denture base materials.

**Advantages**

- Secure bonding, even in difficult situations.
- Durable and gap-free bonding.
- Transparent, invisible colour.
- Usable for all prosthetic materials and acrylic teeth.

**Application**

- Between denture material and acrylic teeth.
- Between denture material and repairs.



# Pala cre-active – Characterisation of PalaVeneer Veneerings.

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## Pala cre-active

Light-curing colourfluid system for customised characterisation of dentures. These light-curing colourfluids in combination with the Signum connector for heat-curing and cold-curing resins are particularly suitable for customised characterisation of full and partial dentures and implant-retained dentures.

The Pala cre-active colourfluids can be mixed into the Pala cre-active gingiva material as colour intensifying agents. Thanks to the variety of consistencies and colour shades, highly customised gingival regions can be created that feature smooth or rough surfaces with transparent, light red or dark red effects.

## Advantages:

- Easy, quick application.
- Gingival customisation easy and fast application.
- Various consistencies available (paste/liquid).
- Intensive colourfluids (painting colours) in 6 different colours.
- Pala cre-active gingiva materials as base in 6 different colours.
- Easily trimmed and polished.

You can see how to work Pala cre-active easily step by step at [www.heraeus-kulzer.com](http://www.heraeus-kulzer.com).



Delivery form	Art. Code
Pala cre-active Set 66033445	
12 x 3 g	Pala cre-active (white, polar, pink, red, maroon, gingiva pink, black, gum, gingiva shade 200, gingiva R50, gingiva light pink, gingiva clear)
1 x	Pala cre-active Shade Guide
1 x	brush
20 x	cannulae (metal), 1.2 mm
5 x	cannulae (plastic), 1.87 mm

Delivery form	Art. Code
Pala cre-active (refills)	
1 x 3 g	
<b>Colourfluids</b>	
white	66033447
polar	66033448
pink	66033449
red	66033450
maroon	66033461
black	66033462
<b>Colourfluids</b>	
gingiva pink	66033463
gingiva shade 200	66033464
gingiva R50	66033465
gingiva light pink	66033466
gingiva clear	66033467
gum	66033468

Application video with Pala cre-active



## Signum connector & Signum insulating gel – Customisation of PalaVeneer veneer shells.



Delivery form

Art. Code

1 x 5 ml

64714211

### Signum connector

Light curing bonding agent between prosthetic acrylic materials and light curing veneering materials.

#### Advantages

- For individual colour and shape modifications on ready-made dentures.
- For the individual colouring of prosthetic based acrylics.



Delivery form

Art. Code

10 g container

64706307

### Signum insulating gel

Universally-compatible insulating gel.

#### Advantages

- Higher plaque-resistance, as it is applied prior to final polymerisation.
- Water soluble, i.e. completely extractable from the modelling material.
- Simple to use.
- Applicable for all modelling Materials.

#### Indication

- Isolation of modelling materials from composite materials.
- Application prior to final polymerisation prevents the creation of a dispersion layer on the veneering surface.

# Signum metal bond

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## Signum metal bond

Bonding agent for crowns, bridges and partial dentures. The bonding agent is extremely resilient and remains strong for a long period of time. It is easier and quicker to process than heat bonding procedures or sandblasting systems. The "2 bottle system" provides an extraordinary adhesive force between the alloy and the veneering composite due to its specialised material composition.

### Advantages

- Innovative cold bonding agent for all dental alloys.
- Wide areas of application (acrylic dentures/composite).
- Due to cold adhesion bonding it is suitable for restorations with a chairside application.
- Up to 300 % better shear bond strength on PM alloy (see graphic below\*).
- Space saving build up of layers.
- Opaque 2nd component for quick metal masking.



Delivery form	Art. Code
Signum metal bond I	
1 x 4 ml	66033915
Signum metal bond II	
1 x 4 ml	66033916



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In accordance with European Directive 93/42/EEC,  
our products bear the CE marking on the basis of their  
classification.