

artConcept® PLUS

VENEER AESTHETICS



step by step



INDICATIONS

- complete or partial tooth loss
- loss of tooth structure

APPLICATION

Replacement of lost tooth structure by:

- tooth-coloured fixation or backing of artVeneer®, artVeneer® life and acrylic teeth
- veneering of telescope, attachment, bar and implant constructions with artVeneer®, artVeneer® life and artConcept® **PLUS** system
- bonding acrylic teeth to the model cast with back protection plate or pontic
- individualisation of acrylic teeth, artVeneer®, artVeneer® life and CAD/CAM manufactured restorations made of M-PM® Disc and artBloc® Temp
- production of temporary crowns and bridges
- repairs

FEATURES AND BENEFITS

- high bond strength
- high colour stability
- individual and adjustable
- aesthetic
- excellent fit
- easy to polish
- high plaque resistance thanks to state-of-the-art PMMA formulation
- colour-stable thanks to modern catalyst system
- tested biocompatibility

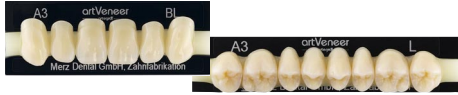


SYSTEM COMPONENTS



artVeneer®, artVeneer® life

anterior and posterior veneers in 16 V Classic and 4 bleach shades



artDentine PLUS, artEnamel PLUS Polymer

The assortment consists of all dentine base shades (A-D), four incisal masses artEnamel PLUS and one transparent. They are suitable for fixation and colour backing of PMMA veneers as well as for individualising PMMA prefabricated teeth.

- an efficient assortment to achieve the highest aesthetic requirements
- natural colour effect through insertion moulding technique
- excellent bond due to material identical properties (PMMA based)
- **artDentine PLUS Liquid NT** (Normal Time), with normal processing time
- **artDentine PLUS Liquid LT** (Long Time), with a significantly extended flowability



artPrime PLUS

A modern metal primer for the metal-acrylic bond significantly improves the adhesion between artPreOpaque PLUS and the metal frame. Based on adhesive monomers, artPrime PLUS ensures a durable bond without elaborate processing and is significantly more resistant to the effects of moisture and thermal stresses.

- improved adhesion values
- improved adhesive monomers
- fast and easy handling
- resistant to the impact of moisture and thermal stresses



artConnect PLUS

is the reliable bonder for the bond between highly cross-linked artVeneer®, artVeneer® life or acrylic teeth – and artDentine PLUS.



artPreOpaque PLUS

for priming and improving the adhesive bond between artPrime PLUS and artOpaque PLUS and is optimal when using mechanical retentions.

- optimised bond matched with the components of the artConcept® PLUS system
- translucent for optimum polymerisation
- reliable surface moistening - easy to apply
- adjusting to undercuts and mechanical retentions
- easy and economical processing
- controllable viscosity (thixotropic)

artOpaque PLUS

to cover metal framework. The range, consisting of three colours in combination with artDentine PLUS and the artVeneer®, artVeneer® life results in a very good shade effect for all A-D shades and 4 bleach shades.

- easy and economical processing
- controllable viscosity (thixotropic)

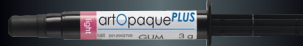
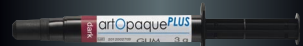
artOpaque GUM PLUS

light-curing gingival shaded opaquer and primer all in one. artOpaque GUM PLUS to cover metal frames and retentions, saving the additional application of a primer.

artVeneer wax PLUS

artVeneer wax PLUS, tooth-coloured fixing wax for attaching the artVeneer®, artVeneer® life during waxing and fitting.

- secure fixation of artVeneer®, artVeneer® life
- high adhesion
- slightly flexible
- excellent modeling properties thanks to short-molecular components
- fast cooling allows fast work
- high molecular density - easy to scrape
- shaves cleanly and leaves smooth surfaces
- suitable for oral try-ins



Brief Instruction

STEP 1

Check for defects

After boiling off, check between the crown frameworks, model casting saddles and artVeneer®, artVeneer® life for sufficient space. (Fig. 1)

Tip: Before blasting, roughen the retention beads for sufficient mechanical retention (undercuts). (Fig. 2)

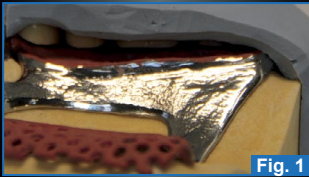


Fig. 1



Fig. 2



Fig. 3

STEP 2

Blast the framework with 50-100µm aluminum oxide max. 2 bar. (Fig. 3)

STEP 3

Applying artOpaque PLUS GUM (Fig. 4)

Thinly apply the gingiva-coloured opaquer in several coats, in a wash-like manner and polymerise in between.

Tip: Due to the integrated adhesive monomers in the artOpaque PLUS, the use of a metal primer is not necessary.



Fig. 4

STEP 4

Applying artPrime PLUS (Fig. 5)

Apply artPrime PLUS thoroughly with a disposable brush and allow to air for approx. 10 sec. The primer produces the bond between the metal framework surfaces and opaquer.

Important! A long wait between the individual working steps reduces the adhesion values.



Fig. 5

STEP 5

Applying artPreOpaque PLUS (Fig. 6)

Apply artPreOpaque PLUS evenly and thinly. Due to its flowable consistency, the artPreOpaque PLUS reaches all retention areas of the framework when first applied. The slightly transparent material allows optimal polymerisation even in the undercuts of the retention and thus forms the basis for the best possible bond.



Fig. 6

step by step

STEP 6**Applying artOpaque PLUS**

Thinly apply the first layer of the artOpaque PLUS in a **wash-like manner**, that way the framework is evenly primed according to the desired colour. (Fig. 7)

Important! Each applied layer must be cured in a light-curing unit. Polymerisation times depend on the respective device. The light spectrum must be between 470 - 490 nm.

STEP 7**Applying artOpaque PLUS repeatedly**

Thinly apply the second coat (if necessary, a third coat) of artOpaque PLUS in a wash-like manner to cover the framework in terms of colour. (Fig. 8)

Tip: Every application should be done thinly, which guarantees a complete polymerisation of the opaquer.

Tip: Check that the matrix is stable before preparing the artVeneer[®], artVeneer[®] life. (Fig. 9)

STEP 8**Preparing the veneer shells**

Mechanical conditioning of the veneers. Blasting with 50 - 110 µm aluminum oxide max. 2 bar (left veneer untreated, right veneer blasted - Fig. 10). Then blow off the activated surface with oil-free compressed air. Alternatively, the artVeneer[®], artVeneer[®] life can also be roughened with a clean diamond or stones.

Tip: It is advisable to cut down the vestibular edges, which are to be applied with acrylic, in order to make the transitions invisible. (Fig. 11)

Check that the artVeneers[®], artVeneers[®] life are in place in the matrix.

Prepared artVeneers[®], artVeneers[®] life and artegral[®], artegral[®] life teeth. (Fig. 12)



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12

Brief Instruction

STEP 9

Applying the bonder artConnect PLUS (Fig. 13)

This is applied to the roughened, wax-, dust- and grease-free surfaces of the artVeneer[®], artVeneer[®] life.



Fig. 13

Important! (Fig. 14)

For the effectiveness of the artConnect PLUS, a rich application is recommended. Optimal is a moist shiny surface during the 5-minute exposure time before applying the artDentine PLUS. If the bonding surface is drying out during this time, moisten again with artConnect PLUS.

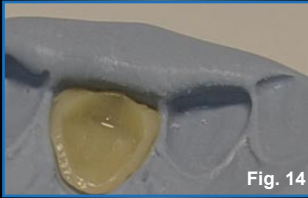


Fig. 14

The models should be sufficiently soaked in water and isolated with a standard separating solution gypsum against acrylic.

STEP 10

Processing the acrylic

Processing instructions artDentine PLUS Liquid NT and LT

- mixing ratio of polymer to monomer: 10 g : 7 ml
- polymerisation 15 min in a pressure pot a 45 °C and 2 - 2.5 bar pressure

artDentine PLUS Liquid LT (Long Time), for an extended processing time of up to 2 minutes in both the flowable and mouldable phase. Ideal at higher ambient temperatures.

Processing instructions

artDentine PLUS NT (Normal Time)

artDentine PLUS LT (Long Time)

21 °C

NT 30 sec 65 sec 90 sec 185 sec

LT 30 sec 155 sec 190 sec 375 sec

30 °C

LT 30 sec 50 sec 100 sec 180 sec

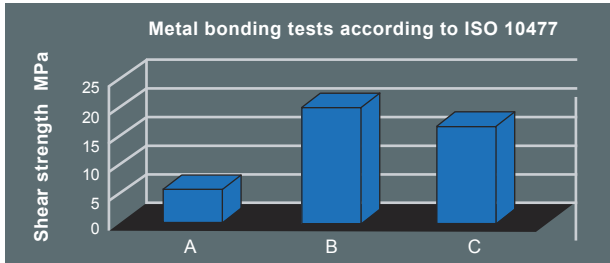
mixing time | developing time | pourable | total processing time

step by step

STEP 11

Applying the tooth-coloured acrylic (Fig. 15)

Apply the acrylic dough to the veneering surface of the framework and inner surfaces of the artVeneers®, artVeneers® life. Make sure that the undercuts are filled evenly and completely and avoid trapped air. This ensures the acrylic bond and avoids air pockets. (Fig. 16)



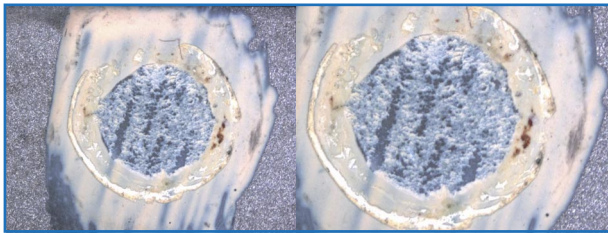
A ISO 10477

B Pressure shear bond

C Pressure shear bond after 25000 TLW

Measurement Göbel, University of Jena, Germany October 2018

Bond strength veneering acrylic - non precious metal



Pressure-shear test after 25,000 TLW (temperature load change, 5 °C - 55 °C) cohesive failure after artificial aging

Source: Mr. Schröter; University Hospital Jena, Prosthetics and Materials Science (Head: Univ. Prof. H. Küpper).

Tip: To extend the processing times, it is recommended to use artDentine *PLUS* Liquid LT (Long Time).

Tip: The artDentin *PLUS* can be accurately measured and applied with an application syringe.

Using the application syringe prolongs the acrylic processing time. (Fig. 17)



Fig. 15



Fig. 16



Fig. 17

Brief Instruction

STEP 12

Preparation for the finishing

Apply the acrylic dough to the roughened, wax-, dust- and grease-free contact surfaces (artVeneers®, artVeneers® life and framework), paying attention to filling out the undercuts and the concave areas with acrylic completely. This ensures the acrylic bond and avoids air pockets. (Fig. 18)

Tip: For fixing within the matrix, a light adhesive fastening is sufficient. (Fig. 19)

Depending on the handling, the saddles can be filled individually or simultaneously.

Note: Incisal or occlusal mould corrections, application of enamel edges and cusp tips as well as the intensification of enamel effects can be achieved with the Enamel PLUS enamel and transparent materials.

Additional working steps

- removing the matrix
- tidying the excess
- placing the restoration back onto the model
- checking the fit
- finishing the acrylic saddles with pink acrylic

Finishing artVeneer®, artVeneer® life and artConcept® PLUS

STEP 1

Removing the excess

with a fine bur or a diamond grinder. (Fig. 20)

Separate and tidy the interdental spaces with a diamond-coated disc. (Fig. 21)



Fig. 18



Fig. 19



Fig. 19



Fig. 20



Fig. 21

step by step

STEP 2**Tidying the cervical and interdental spaces**

with a tungsten carbide instrument of suitable size.
(Fig. 22)

STEP 3**Contouring and rubberising**

with rubber polishers (eg. silicone wheel) for contouring the transitions of acrylic components as well as for smoothing the transitions between the framework and veneer.
(Fig. 23 and 24)

Finished denture, prepared for polishing.
(Fig. 25)

STEP 4**Polishing**

Polish the veneer surface and interdental spaces with a soft goat hair brush and suitable polishing pastes.
(Fig. 26)

Tip: In order to preserve the fine surface structures of the artVeneer and not to influence the natural light refraction, it is not recommended to polish with pumice under the polishing machine.

Secondary construction finished with artVeneer[®], artVeneer[®] life and artConcept[®] PLUS.
(Fig. 27 and 28)



Fig. 22



Fig. 23



Fig. 24



Fig. 25

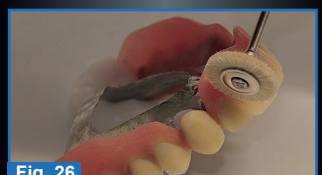


Fig. 26



Fig. 27

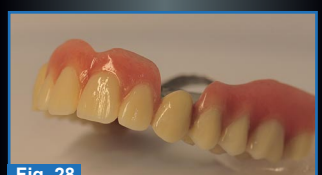


Fig. 28



Merz Dental GmbH

Kieferweg 1, 24321 Lütjenburg, Germany

Tel + 49 (0) 4381 / 403-0

Fax + 49 (0) 4381 / 403-403

www.merz-dental.de

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