

kuraray

Noritake

**HIGH DEMANDS
AND POWER**

PANAVIA™ F 2.0



THE UNIQUE ANAEROBIC-CURING RESIN CEMENT

The PANAVIA™ brand looks upon a scientific and clinical track record of more than 30 years. Being recommended as the universal adhesive resin cement of first choice, PANAVIA™ is regarded as the guarantee for permanent adhesive techniques in the areas of high-quality and difficult restorations, of all ceramic and metal restorations as well as endodontic post cementations.

PANAVIA™ F 2.0 is accepted as a premium product by leading universities, displaying a high bond strength to tooth structures, metals and ceramics. In combination with the self-etching primer system, PANAVIA™ F 2.0 reduces post-operative sensitivity and provides consistently good results. The anaerobic-curing* properties which do not begin until direct contact has been made with the restoration (no more contact with oxygen) and the smooth consistency make PANAVIA™ F 2.0 a popular aid in daily practice due to the user's self-defined working time. Even after releasing fluoride, the cement maintains its high mechanical strength due to the special surface coating technology with sodium fluoride.

*def. 'anaerobic': not using oxygen from the air (compare Oxford English Dictionary 2008); exclusion of oxygen.



CHARACTERISTICS AND ADVANTAGES OF PANA VIA™ F 2.0

Characteristics

Universal adhesive resin cement with proven high bond strength



Unique self-etching primer system



Anaerobic properties



No silane-treatment necessary for zirconia restoration



Special surface coating technology with sodium fluoride



Advantages

Usage also for difficult clinical situations

Mild etching leading to a reduction of post-operative sensitivities. In addition, the catalyst system accelerates the polymerization of the cement from the tooth/cement interface to reduce the polymerization shrinkage stress.

No time pressure even when cementing difficult restorations due to long working time

Time saving due to less working steps

High mechanical strength remains even after releasing fluoride into tooth structures

INDICATION

- + Cementation of crowns, bridges, inlays, onlays and veneers made of metal, ceramic and composite resin
- + Cementation of adhesion bridges
- + Cementation of metal cores, resin cores, metal posts or glass-fiber posts
- + Amalgam bonding

APPLICATION

- + Metal, metal alloys (e.g. gold alloy or titanium)
- + Metal oxide ceramics (e.g. zirconia)
- + Silica-based ceramics
- + Hybrid ceramics (e.g. ESTENIA™ C&B)
- + Composites
- + Metal- and glass-fiber posts

PANAVIA™ F 2.0 – PROPERTIES AND APPLICATION

PANAVIA™ F 2.0 is a dual-cure resin cement with anaerobic properties. Thus, the excess paste of PANAVIA™ F 2.0 can be light-cured by conventional halogen or LED lights. The cement which the light cannot reach is cured by its self-curing reaction in anaerobic conditions (with the exclusion of oxygen).

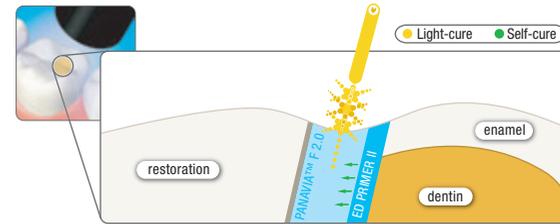
ED PRIMER II – THE PERFECT PRIME AND ETCH

The self-etching ED PRIMER II is an advanced development – a convenient one-step procedure for etching and priming. ED PRIMER II penetrates gently and effectively enamel and dentin in one step. That enables the perfect penetration by Kuraray's well-proven adhesive monomer MDP*.

When PANAVIA™ F 2.0 contacts the dried ED PRIMER II surface, the paste polymerizes from the adhesion interface. This is due to the polymerization accelerators in ED PRIMER II. The unique self-etching primer system reduces the polymerization stress on the adhesion interface. In consequence the optimal bond strength is guaranteed and the potential development of margin gaps is reduced. The result is a favorable clinical integration.

*MDP: Please see page 6

Dual-cure polymerization system with ED PRIMER II



ED PRIMER II – in brief

- Simplified pre-treatment: the self-etching ED PRIMER II enables the effective and gentle penetration of enamel and dentin in one step.
- Prevention of post-operative sensitivity through optimally harmonized, mild pH value (pH 2.4)
- Simple and forgiving handling through the water-based primer
- Chemical bond to the hydroxylapatite is created within the clinically relevant time period.

CLEARFIL™ CERAMIC PRIMER PLUS

The newly developed CLEARFIL™ CERAMIC PRIMER PLUS is a one-bottle ceramic primer that contains MDP, γ -MPS and ethanol. It maintains excellent adhesion properties on ceramic restorations in a long-term storage through the optimum combination of these ingredients. Besides the proven adhesive monomer MDP for bonding to metal or metal oxide ceramic, it also contains the silane coupling agent γ -MPS, which ensures a strong hold on silica-based ceramics.



CLINICAL CASE



TECHNICAL DATA

	Shear Bond Strength	
	24 hours	3.000 thermal-cycles
Human enamel	28.7 MPa	28.0 MPa
Human dentin	15.8 MPa	15.4 MPa
Zirconia (Cercon™)	43.4 MPa	34.4 MPa
Alumina (Procera™)	32.4 MPa	28.4 MPa
Gold Alloy (Type IV)*	28.0 MPa	32.3 MPa
Titanium (Titan 100)	38.8 MPa	37.6 MPa

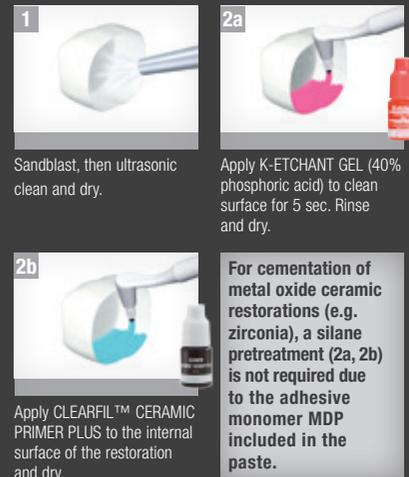
*with ALLOY PRIMER
Source: Kuraray Medical Inc.

CLINICAL PROCEDURE

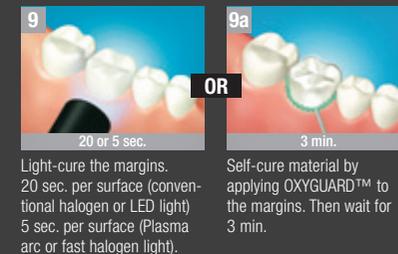
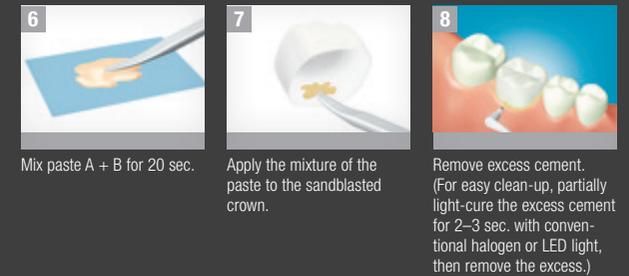
Cementation of precious & semi-precious metal crowns, PFM crowns, bridges, inlays and onlays



Cementation of ceramics/ composite restorations



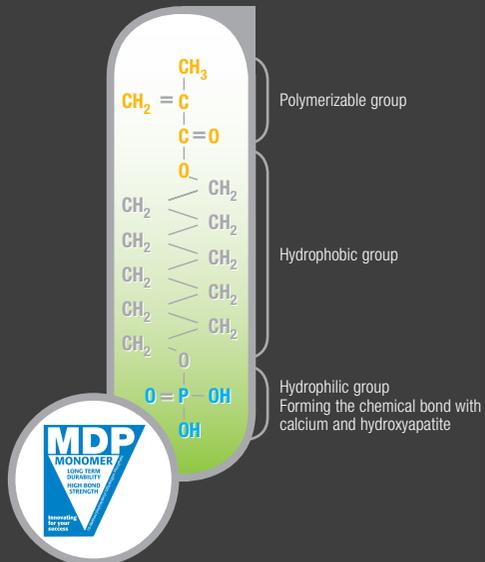
Common steps



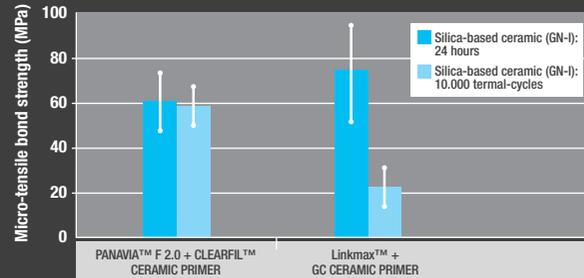
STRONG BOND STRENGTH & CONSISTENT MARGINAL INTEGRITY

Kuraray's unique adhesive monomer MDP in the primer creates a strong chemical bond to hydroxylapatite. Being in use for more than 20 years, the MDP has a proven excellence in adhesion. It is a guarantee for a high bond strength and shows a reliable adhesion durability to the tooth structures.

Structure of adhesive monomer MDP

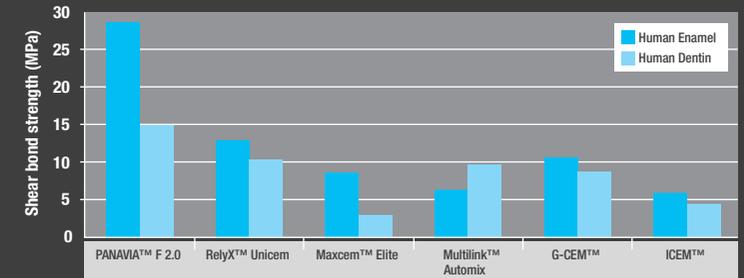


BOND STRENGTH OF RESIN CEMENTS TO SILICA-BASED CERAMIC



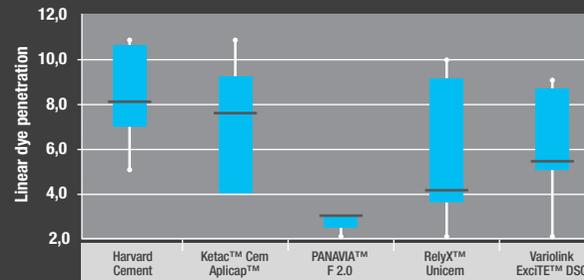
Source: K. Hikita, T. Maida, Y. Ikeda, T. Kawakami, K. Endo and H. Ohno, Health Sciences University of Hokkaido, Japan, 2006

SHEAR BOND STRENGTH TO HUMAN TOOTH AFTER 3.000 THERMAL-CYCLES



Source: Kuraray Medical Inc.

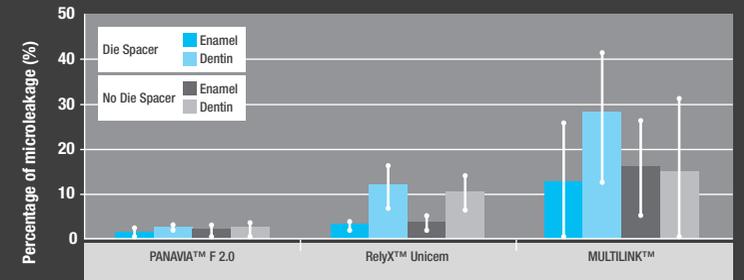
LEAKAGE OF DIFFERENT LUTING CEMENTS FOR QUARTZ-FIBER POST CEMENTATION



PANAVIA F 2.0 in combination with ED Primer II revealed least leakage values when DTLight quartz fiber posts were inserted. (The boxplot diagram depicts the medium values and the 25 respectively 75 percentile values of the relevant measurements of cements.)

Source: W. Dasch, M. El-Aryan, M.J. Roggendorf, J. Ebert, A. Petschelt, and R. Frankenberger, University of Erlangen-Nuernberg, Germany, 2008

MICROLEAKAGE OF ALL-CERAMIC CROWNS USING SELF-ETCHING RESIN LUTING AGENTS



PANAVIA F 2.0 showed a lower degree of micro leakage than RelyX Unicem and Multilink at both the enamel and dentin margins. The degree of micro leakage for the die spacer group was not significantly different from the group with no die spacer technique (p>0.1).

Source: CP Trajtenberg, SJ Caram, S Kiat-amnuay, University of Texas, Operative Dentistry, 2008, 33-4, 392-399

AVAILABLE IN FOUR COLOR SHADES:



- TC (tooth color)**
 Color support for the natural tooth.
- Light (translucent)**
 Transparent, ideal for veneers, restorations made of metal oxide ceramics.
- White**
 But not opaque. Affects dark tooth and tooth discolorations optimally and naturally.
- Opaque**
 Covers the underlying surface completely. Especially suitable for precious/non-precious alloys and adhesion/Maryland bridges.

ORDER INFO

PANAVIA™ F 2.0: Kit

- #485-EU TC
- #486-EU Light
- #487-EU White
- #488-EU Opaque



- 1 PANAVIA™ F 2.0 A Paste (5.0 g/2.3 ml),
- 1 PANAVIA™ F 2.0 B Paste (4.6 g/2.3 ml),
- 1 ED PRIMER II Liquid A (4 ml), 1 ED PRIMER II Liquid B (4 ml), 1 ALLOY PRIMER (1 ml),
- 1 OXYGUARD™ II (6 ml), Accessories: 1 mixing pad, 1 spatula, 1 mixing dish, 1 brush tip handle, 200 disposable brush tips, 20 disposable nozzles, 1 light blocking plate

PANAVIA™ F 2.0: Introductory Kit

- #480-EU TC
- #481-EU Light
- #482-EU White
- #483-EU Opaque



- 1 PANAVIA™ F 2.0 A Paste (2.1 g/1 ml),
- 1 PANAVIA™ F 2.0 B Paste (1.9 g/1 ml),
- 1 ED PRIMER II Liquid A (1 ml), 1 ED PRIMER II Liquid B (1 ml), 1 OXYGUARD™ II (1.5 ml),
- Accessories: 1 mixing pad, 1 spatula, 1 mixing dish, 1 brush tip handle, 50 disposable brush tips, 5 disposable nozzles, 1 light blocking plate

PANAVIA™ F 2.0: Refill

A Paste

- #493-EU (5.0 g/2.3 ml)



B Paste

- #494-EU TC (4.6 g/2.3 ml)
- #497-EU Light (4.6 g/2.3 ml)
- #495-EU White (4.6 g/2.3 ml)
- #499-EU Opaque (4.6 g/2.3 ml)



ED PRIMER II

- #491-EU Liquid A (4 ml)
- #492-EU Liquid B (4 ml)



OXYGUARD™ II

- #490-EU (6 ml)



- OXYGUARD™ II Disposable Nozzles**
- #917-EU (20 pcs.)

CLEARFIL™ CERAMIC PRIMER PLUS

- #3637-EU (4 ml)



ALLOY PRIMER

- #064-EU (5 ml)



K-ETCHANT GEL

- #013-EU (6 ml)



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