

In 1926, Kuraray was established in Kurashiki, Japan, where the industrial production of viscose rayon began. Though intensive research and development the company succeeded in building up extensive expertise and technological strength in the fields of polymer chemistry, synthetic chemistry and chemical engineering.

Kuraray entered the field of dental materials in 1973. The mission of Kuraray was to respond precisely and thoroughly to the needs of the dental profession with reliable products of superior quality. In 1978, Kuraray introduced the first bonding system to the market: CLEARFIL™ BOND SYSTEM F, the start of the age of adhesive dentistry. At the same time, the company developed the "total-etch technique" for enamel and dentin. Over four decades, Kuraray Noritake Dental Inc. continues to bring forth innovative, quality products to meet the demands of a continuously changing dental profession.

- Read the Instructions for Use supplied with the products before use.
- The specifications and appearance of the product are subject to change without notice.

Ote Center Bldg., 1-1-3, Otemachi, Chiyoda-ku, Tokyo 100-0004
<http://www.kuraraynoritake.com/wd>

"CLEARFIL" and "PANAVIA" are trademark of KURARAY Co., Ltd.



CLEARFIL™ S³ BOND Universal ***[CLEARFIL TRI-S BOND Universal]***

WITH UNIVERSAL CLINICAL INDICATIONS



CLEARFIL™ TRI-S BOND Universal

For all your etching and restorative needs

CLEARFIL™ TRI-S BOND Universal is a single-component, light-cure bonding agent indicated for both direct and indirect restorations in combination with three etching techniques (Total-Etch, Self-Etch and Selective-Etch).

It's also indicated for the surface treatment of zirconia & silica-based glass ceramics.

CLEARFIL™ S³ BOND Universal

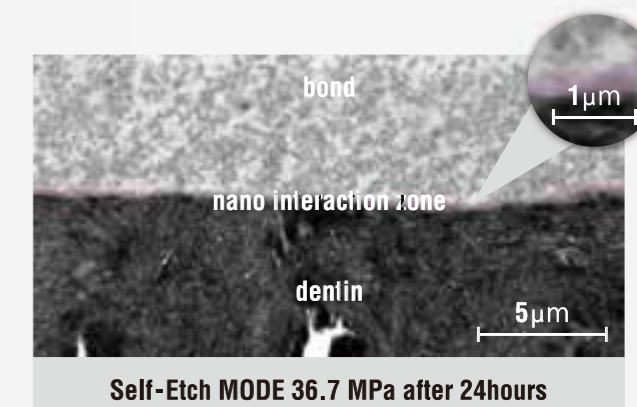
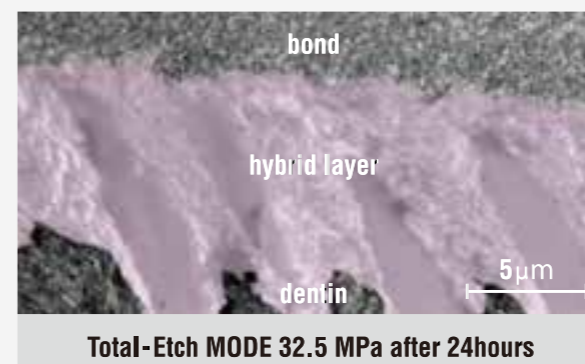
[CLEARFIL TRI-S BOND Universal]

FOR ALL YOUR ETCHING AND RESTORATIVE NEEDS

Total-Etch, Self-Etch and Selective-Etch Techniques can be used based on Kuraray's original MDP technology.



These images below show a good interaction between MDP and hydroxyapatite in Total and Self-Etch mode.



Universal-Use with high performance

Direct restoration (using light-cured composite resin)

Follow the standard procedures for isolation, moisture control, cavity preparation and pulp protection

1 Tooth Pretreatment Choose either etching procedure

a. Self-etching Move to section 2	b. Selective etching Apply a phosphoric acid to the uncut and/or cut enamel, then rinse and dry	c. Total etching Apply a phosphoric acid to the entire cavity (enamel and dentin), then rinse and dry
---	---	---

2 Apply BOND and rub 10sec.

3 Dry by blowing mild air 5sec.

4 Light-cure*¹⁾

5 Place composite resin, light-cure and finish

*¹⁾ Refer to the table for light-curing time.

CORE BUILD-UP with Glass Fiber Post

No additional primer or activator is needed when used with CLEARFIL™ DC CORE PLUS

1 Post Pretreatment for Glass Fiber Post

5sec. Apply a phosphoric acid, rinse and dry

5sec. + 5sec. Dry Apply BOND, then dry by blowing mild air

2 Tooth Pretreatment Choose either etching procedure

a. Self-Etch Move to section 3	b. Total-Etch*²⁾ 10sec.	c. Selective-Etch*³⁾ 10sec.
--	---	---

3 Apply BOND and rub, Dry by blowing mild air and paper point 10sec. 5sec. Dry

4 Light-cure

5 Placing the post and core build-up

Post cementation and core build-up using CLEARFIL™ DC CORE PLUS according to the manufacturer's instructions

*²⁾ Apply a phosphoric acid to the entire cavity (enamel and dentin), then rinse and dry *³⁾ Apply a phosphoric acid to the uncut and/or cut enamel, then rinse and dry

INDIRECT for Metal oxides (e.g. Zirconia)

No additional primer or activator is needed when used with PANAVIA™ SA CEMENT PLUS

2 Tooth Pretreatment Choose either etching procedure

a. Self-Etch Move to section 3	b. Total-Etch*⁴⁾ 10sec.	c. Selective-Etch*⁵⁾ 10sec.
--	---	---

1 Sand blast with alumina powder, then ultrasonic clean and dry

3 Apply BOND and rub Dry by blowing mild air 10sec. 5sec. Dry

Light-curing of bond is an option for optimal performance.

4 Cementation using PANAVIA™ SA CEMENT PLUS according to the manufacturer's instructions

*⁴⁾ Apply a phosphoric acid to the entire cavity (enamel and dentin), then rinse and dry *⁵⁾ Apply a phosphoric acid to the uncut and/or cut enamel, then rinse and dry

INTRAORAL REPAIR of fracture restoration

No additional primer is needed when used for intraoral repair

CLEARFIL™ TRI-S BOND Universal can be used adhere to almost all material* w/o additional primers; no need for separate silane coupling agent.

1 Roughen, wash and air dry

2 Apply phosphoric acid, then rinse and dry 5sec.

3 Apply BOND and rub Dry by blowing mild air 10sec. 5sec. Dry

4 Use an opaque resin (e.g. CLEARFIL™ ST OPAQUER) to mask metal color.

*Enamel, dentin, glass-ceramics, composites, precious metals, metals, and metal oxides such as zirconia.

CLEARFIL™ DC Activator

To provide a wide application with CLEARFIL™ DC Activator

CLEARFIL™ TRI-S BOND Universal can be mixed with CLEARFIL™ DC Activator to become a dual-cure adhesive which can be used with self/dual-cured resin cement or core material.

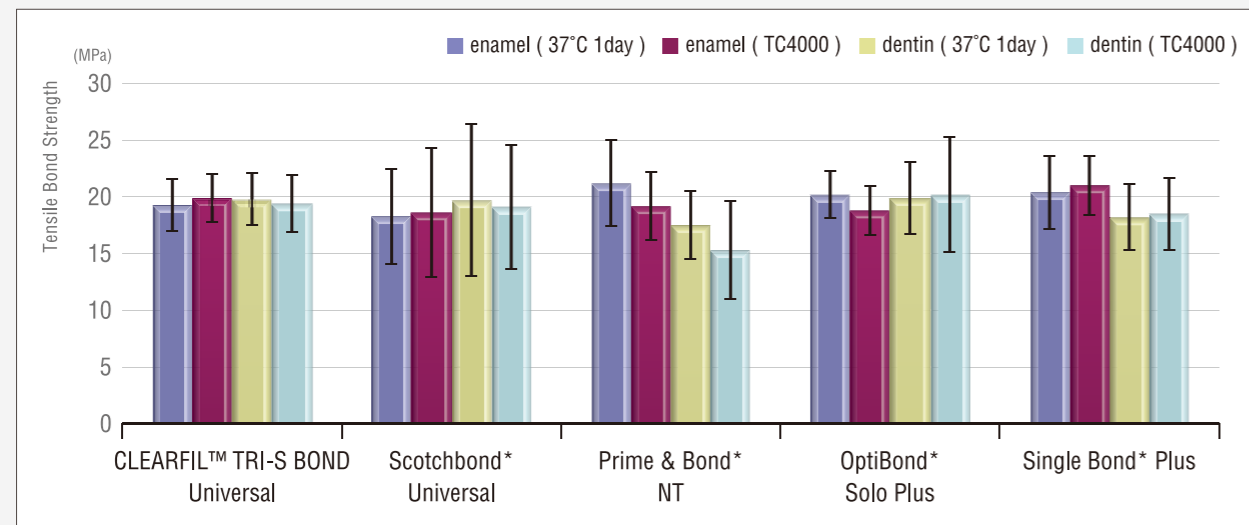


*Working time will be shortened dramatically when not light-curing the mixture on the adhered surface.
*The addition of "CLEARFIL™ DC Activator" to CLEARFIL™ TRI-S BOND Universal is not required when using with "CLEARFIL™ DC CORE PLUS" or "PANAVIA™ SA CEMENT PLUS".

Scientific Data

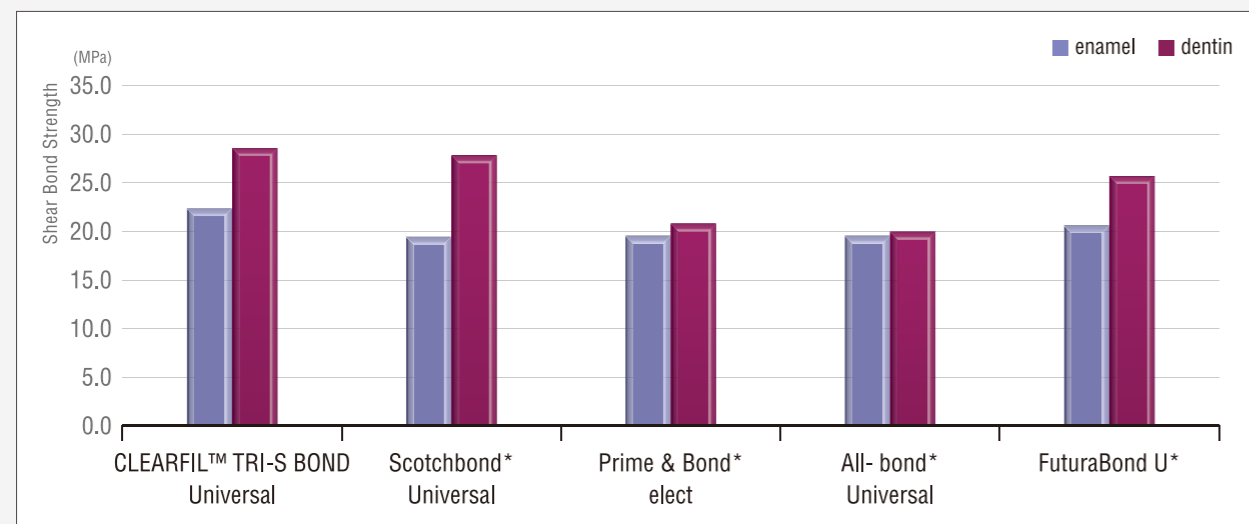
Bond Strength to Enamel and Dentin

Total-Etch mode (Tensile Bond Strength)



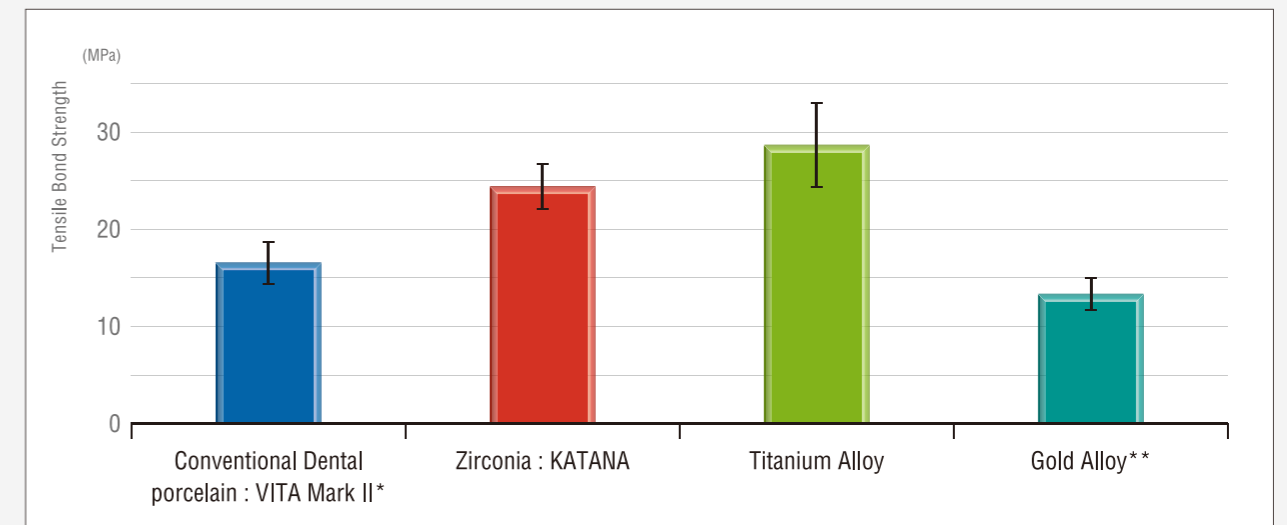
*Not a trademark of Kuraray Co.,Ltd Source: Kuraray Noritake Dental Inc.

Self-Etch mode (Shear Bond Strength)



Shear bond strength to various material

Bond strength to various materials



These surfaces are treated by CLEARFIL™ TRI-S BOND Universal *Pretreatment by K-Etchant Gel 5sec, wash and dry. Source: Kuraray Noritake Dental Inc.

INDICATIONS

- Direct restorations using light-cured composite resin
- Cavity sealing as a pretreatment for indirect restorations
- Treatment of exposed root surfaces
- Treatment of hypersensitive teeth
- Intraoral repairs of fractured restorations
- Post cementation and core build-ups
- Cementation of inlays, onlays, crowns, bridges and veneers

