

CLEARFIL™ SE BOND 2

Dental Universal Self-Etch Adhesive

THE GOLD STANDARD IS NOW A TRULY UNIVERSAL ADHESIVE!

From the Developers of the original **MDP** Adhesion Monomer, the First Self-Etch Bonding Agents, the First Total-Etch Bonding Agents and the First Self-Adhering Resin Cements In Dentistry.



THE BEST JUST GOT BETTER !

- New Catalyst Chemistry for Stronger Bonds
- New **CLEARFIL DC Activator** for Universal Applications
- Exceptional, Long-Term, Independent Clinical Studies
- Simple, Proven Procedure: No Hidden Steps
- Ideal for Bulk-Fill Composites
- Low Film Thickness for Indirect Restorations
- Stable & Durable Surface Treatments For Zirconia, Etchable Ceramics & Metal Restorations

KURARAY AMERICA, INC.
 33 Maiden Ln., Suite 600D, New York, NY 10038
 800 879-1676 | kuraraydental.com
 ©2014 Kuraray America, Inc.

Since 1999...

UNIVERSAL CLINICAL APPLICATIONS WITH NEW **CLEARFIL DC Activator**

CLEARFIL SE BOND 2, when mixed with the new **CLEARFIL DC ACTIVATOR** provides a dual-cure chemistry that is ideal for any indirect restoration or composite core build-up material. **CLEARFIL SE BOND 2** is clinically indicated for the following procedures;

1. Direct restorations using light-cured composite resin
2. Cavity sealing as a pretreatment for indirect restorations
3. Treatment of exposed root surfaces
4. Treatment of hypersensitive teeth
5. Intraoral repairs of fractured restorations
6. Post cementation using a dual- or self-cured composite resin
7. Core build-ups using a light-, dual- or self-cured core material
8. Cementing inlays, onlays, crowns, bridges and veneers using a composite resin cement



NEW CATALYST CHEMISTRY PROVIDES EVEN STRONGER BOND STRENGTHS

...**CLEARFIL SE BOND** has improved the quality of adhesion dentistry.

Now we present **CLEARFIL SE BOND 2** a two-step, self-etch, light-cure bonding agent with an improved catalyst system for stronger bonds and a new dual-cure activator for use with all indirect restorations and core build-up composites.

With the same clinical procedure, it is a simple upgrade to our new universal system.

A new integrated photo-initiator chemistry provides more free radicals when curing which relates to higher monomer conversion rates and stronger bonds.

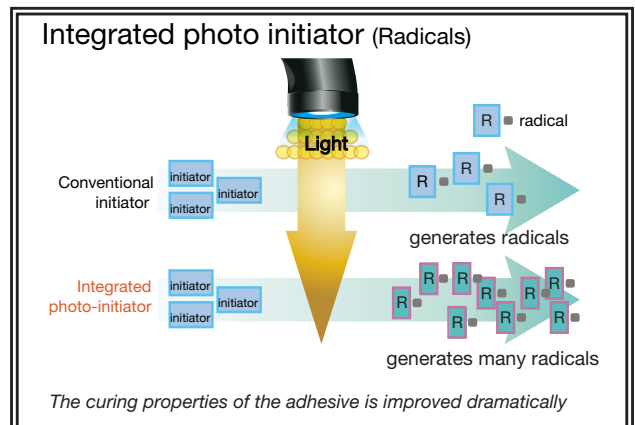


Fig. 1 Schema of the Integrated photo-initiator (Radicals)

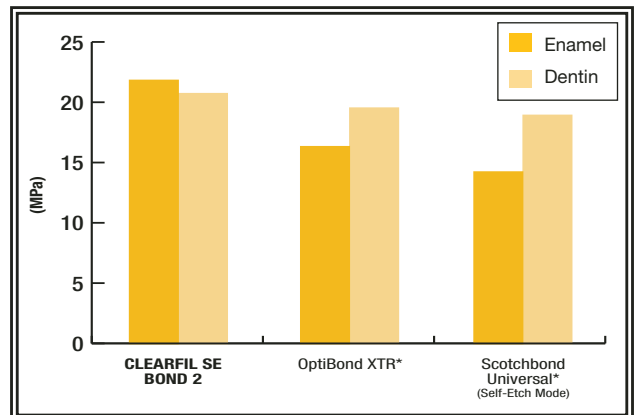


Fig. 2 Tensile bond strength to tooth structure with direct composite after thermal-cycling 4000 times

* Not a trademark of Kuraray Co., Ltd

Source: Kuraray Noritake Dental Inc.



EXCEPTIONAL, UNPARALLELED, LONG-TERM CLINICAL RESEARCH RESULTS

The **CLEARFIL Self-Etch** Adhesives Have An Exceptional Long-Term, Clinical Research History with Cervical Erosion & Class-V Restorations.

The Clinical Studies Range from 5 year to 10 Year Recalls with Retention Rates of 91% to 100%.

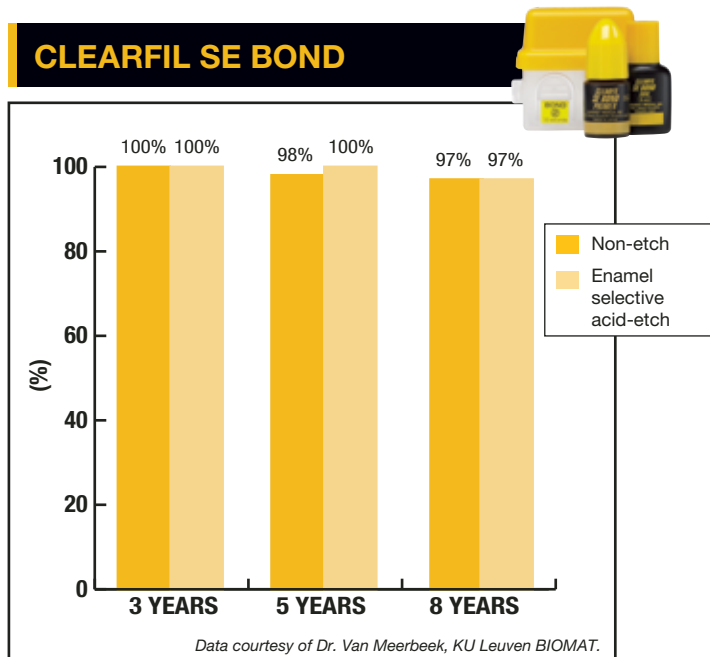


Fig. 3 8-Year Clinical Evaluation, Class-V Restorations

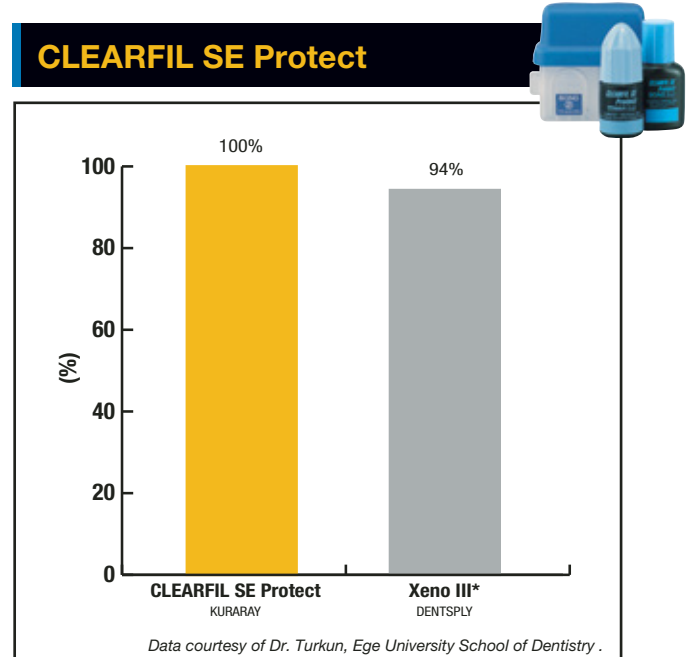


Fig. 4 5-Year Cervical Lesions Retention Rates

* Not a trademark of Kuraray Co., Ltd

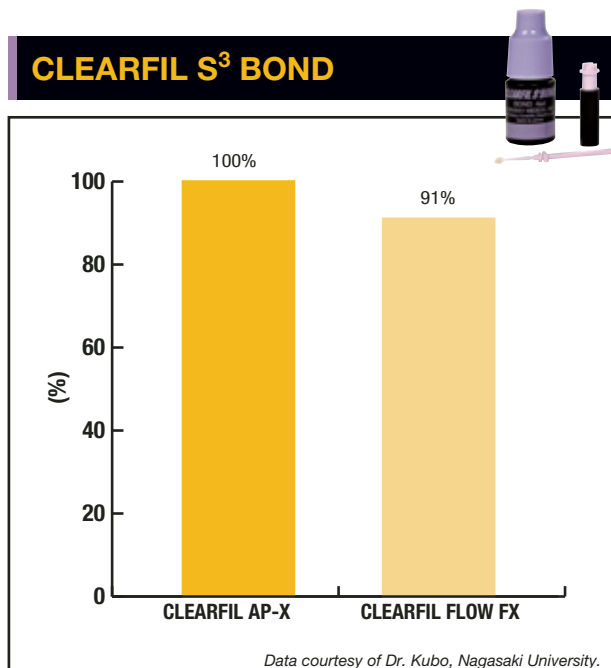


Fig. 5 6-Year Cervical Lesions Retention Rate

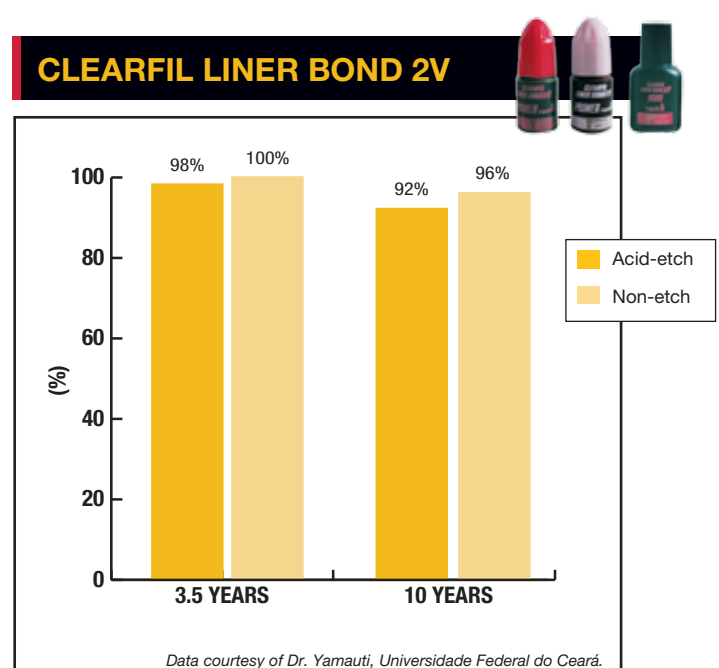


Fig. 6 10-Year Clinical Retention Rates of Cervical Lesions

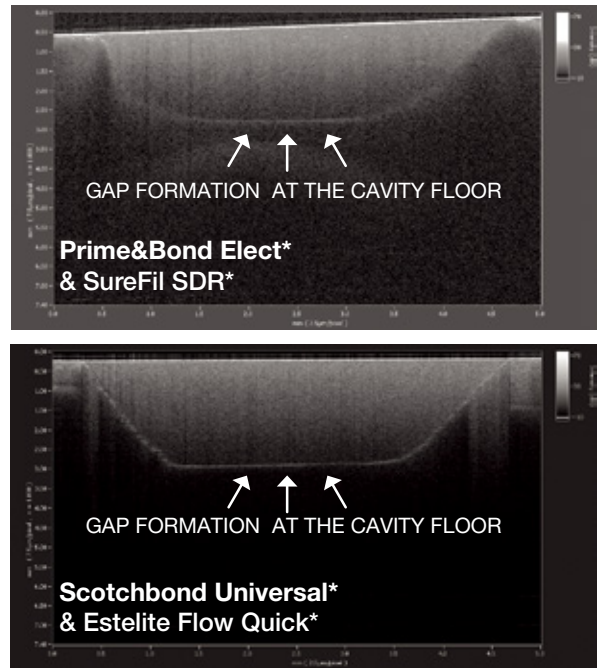
References:

- 1) M. Peumans, J. De Munck, K.L. Van Landuyt, A. Poitevin, P. Lambrechts, B. Van Meerbeek. Eight-year clinical evaluation of a 2-step self-etch adhesive with and without selective enamel etching. Dental Materials 2010; 26: 1176-1184
- 2) L.S. Turkun. Five Year Clinical Performance of An Antibacterial Adhesive System. J Dent Res 87(Spec IssC): Abstract 0623, 2008
- 3) S. Kubo, H. Yokota, and Y. Hayashi. Six-year Clinical Evaluation of Two Types of Resin Composite Restorations. J Dent Res 91(Spec Iss B): Abstract 27, 2012
- 4) M. Yamauti, C.A. Fernandes, L.K. Rodrigues, D.S. Bezerra, M.D. Moraes, and R.M. Carvalho. Ten-year clinical evaluation of cervical lesion restorations using self-etch adhesive. J Dent Res 92(Spec Iss A): Abstract 3106, 2013

IDEAL FOR BULK-FILL COMPOSITES

CLEARFIL SE BOND 2 has excellent initial bond strengths to dentin (With the Original **MDP** Adhesive Monomer) & the ideal adhesive layer to withstand the increased polymerization stress with

bulk-fill composites. This ideal combination is able to provide GAP-FREE dentin margins when bulk-fill composites are used.



Images courtesy of Dr. Sadr and Dr. Tagami, Tokyo Medical & Dental University.

* Not a trademark of Kuraray Co., Ltd

Fig. 7 Optical coherence tomography (OCT) images of the bonding interface with composite

OCT can be used for quantitative and qualitative assessment of composite restorations. This technique can be used in real-time, thereby imaging gaps at the adhesive interface.

SIMPLE, PROVEN PROCEDURE - AVOID TECHNIQUE SENSITIVITY: NO HIDDEN STEPS

CLEARFIL SE BOND 2 has no complicated steps, no-bottle shaking, no-scrubbing before or during the procedure; it reduces human error. It is truly

a low technique sensitive adhesive that helps clinicians create predictable, durable bonds with every clinical case.

	CLEARFIL SE BOND 2	OptiBond XTR**
Primer Scrubbing	NOT REQUIRED	REQUIRED Need to scrub the surface for 20 sec.
Shake Bond (Adhesive) Bottle	NOT REQUIRED	REQUIRED Need to shake the adhesive bottle before dispensing
Bond (Adhesive) Scrubbing	NOT REQUIRED No waiting time	REQUIRED Need to scrub the surface for 15 sec.
Light curing adhesive for internal surface of indirect restorations	NOT REQUIRED	REQUIRED* Need to shake the adhesive bottle before dispensing

* Light-curing is optional if NX3 resin cement is used for cementation. ** Not a trademark of Kuraray Co., Ltd

LOW FILM THICKNESS FOR INDIRECT RESTORATIONS

For indirect restorations, simply mix 1 drop of **CLEARFIL SE BOND 2** Bond with 1 drop of **CLEARFIL DC Activator**. The film thickness of the mixture after air-drying is approximately 3-5 μm and there is no concern about seating restorations.

CLEARFIL SE BOND 2 Bond with **CLEARFIL DC Activator** shows high bond strength to tooth with and without light-curing due to the unique technology; the acceleration of the polymerization starts at bond-cement interface on contact.

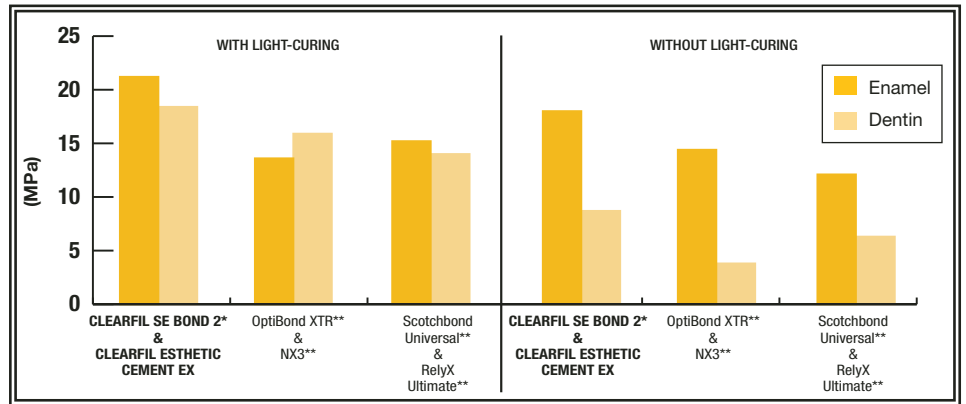
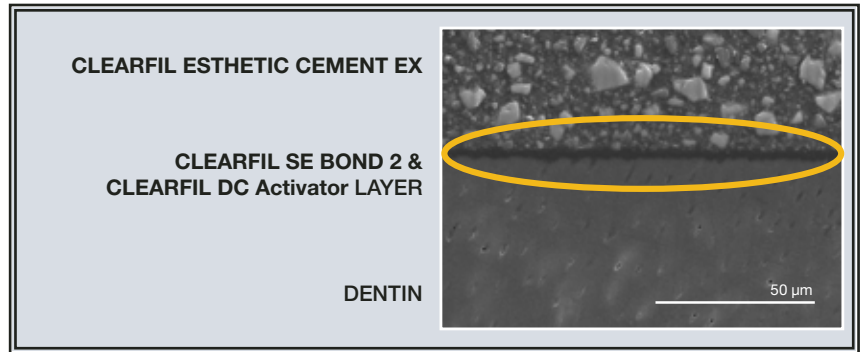


Fig. 8 Tensile bond strength to tooth structure with resin cements

*CLEARFIL SE BOND 2 BOND was mixed with CLEARFIL DC Activator. ** Not a trademark of Kuraray Co., Ltd
Source: Kuraray Noritake Dental Inc.

STABLE & DURABLE SURFACE TREATMENTS FOR ALL-CERAMIC RESTORATIONS

The **CLEARFIL SE BOND 2** Primer contains a high concentration of the original **MDP** Adhesion Monomer and is used to treat the surface of zirconia and metal restorations. It does not require light-curing, thus, eliminating the concern of film thickness under indirect restorations. Some “Universal” systems require light-curing of the adhesives inside of prosthetic restorations. Many independent research studies have shown that the *original MDP adhesive monomer* provides the most durable adhesion to metal oxide ceramics (zirconia and alumina).

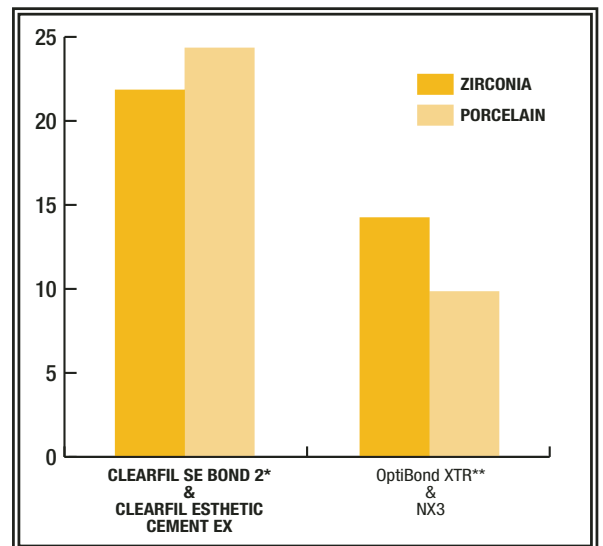


Fig. 9 Tensile bond strength to restorations with cementing materials after thermal-cycling 4000 times

*CLEARFIL SE BOND 2 Primer was applied to Zirconia, mixture of CLEARFIL SE BOND 2 Primer and Porcelain Bond Activator was applied to Porcelain

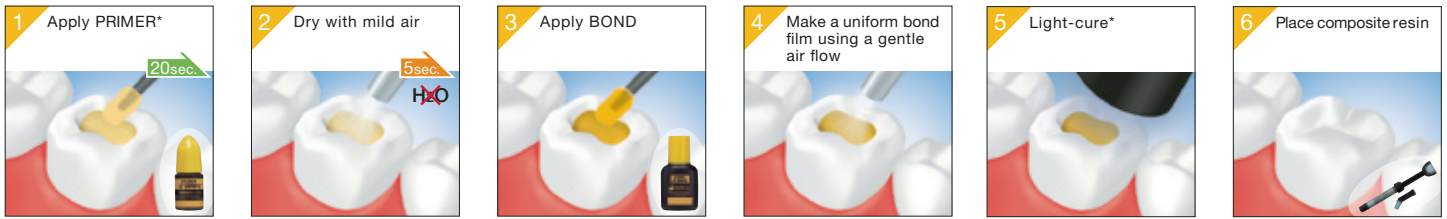
**Adhesive of OptiBond XTR was applied to Zirconia and Porcelain. Not a trademark of Kuraray Co., Ltd

Source: Kuraray Noritake Dental Inc.

BASIC PROCEDURES

Direct Restoration

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

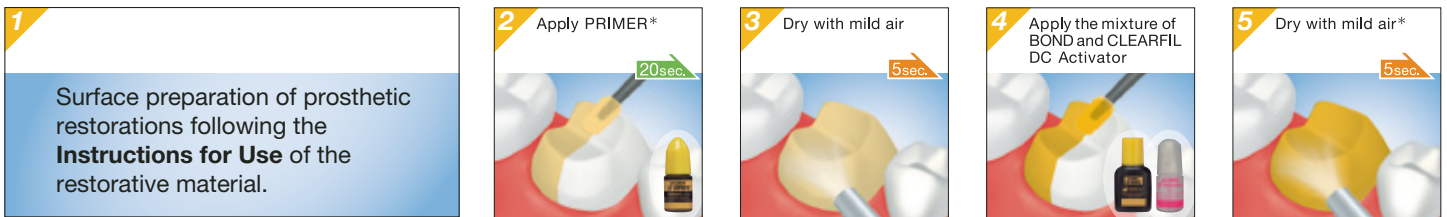


*Before applying PRIMER, selective enamel etch by phosphoric acid is an option.

*Refer to the table for light-curing time in the **Instructions for Use**.

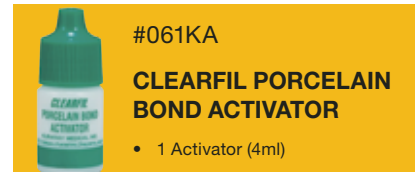
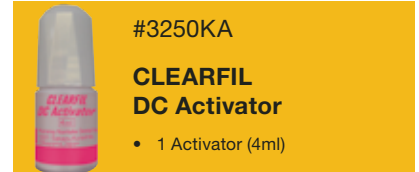
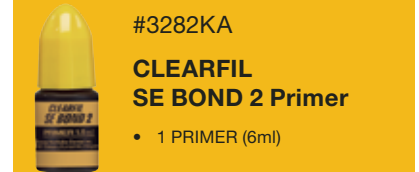
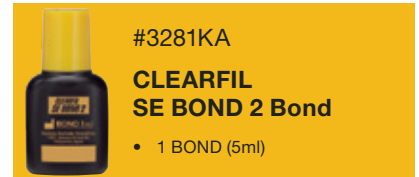
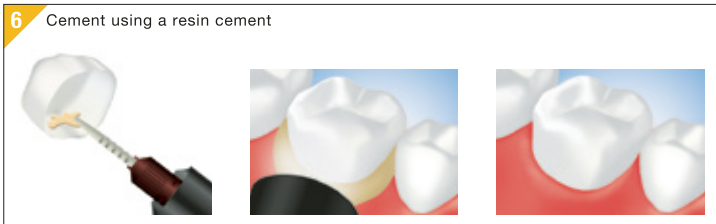
Indirect Restoration

Clean and dry the tooth surface, and then trial fit the prosthetic restoration.



*Before applying PRIMER, selective enamel etch by phosphoric acid is an option.

*Light-curing the mixture is an option for optimum performance.



ORDERING INFORMATION



Warranty: Kuraray Noritake Dental Inc. will replace any product that is proved to be defective. Neither Kuraray Noritake Dental Inc. nor the distributor accepts liability for any loss or damage, direct, consequential or special, arising out of the application or use of or the inability to use these products. Before using, the user should determine the suitability of the products for the intended use and the user assumes all risk and liability whatsoever in connection therein. **CLEARFIL SE BOND 2**, **CLEARFIL DC Activator** and Kuraray Noritake Dental Inc. products are available only through Kuraray Authorized dealers.

“CLEARFIL” is a trademarks of KURARAY Co.,Ltd.

Manufactured by Kuraray Noritake Dental Inc.
1621 Sakazu, Kurashiki, Okayama 710-0801, Japan