

# **CLEARFIL™ SE Protect**

DENTAL BONDING AGENT

SE Protects your patients



# Advanced New Features for More Confidence

## Antibacterial Cavity Cleansing Effect from MDPB

Studies show that the risk of bacteria remaining in a cavity tends to increase with the smaller, “minimal intervention” cavities<sup>1)</sup>. Many doctors are using cavity cleansers, such as Consepis (Ultradent) to address this tendency. CLEARFIL™ SE Protect contains a new functional monomer MDPB, which exhibits an “Antibacterial Cavity Cleansing Effect.”

The antimicrobial effect with CLEARFIL™ SE Protect is greater than with current cavity cleansers as shown in Fig. 1, and is biologically safe because MDPB is fixed and will not leak after curing<sup>2)</sup>. In addition, CLEARFIL™ SE Protect is a cost and time saver by eliminating extra steps.

1) S. Imazato; Dent. Mater. J., 28(1), 11-19, 2009  
2) E.A. Koulaouzidou et al.; J. Contemp Dent. Pract., 9(7), 57-64, 2008

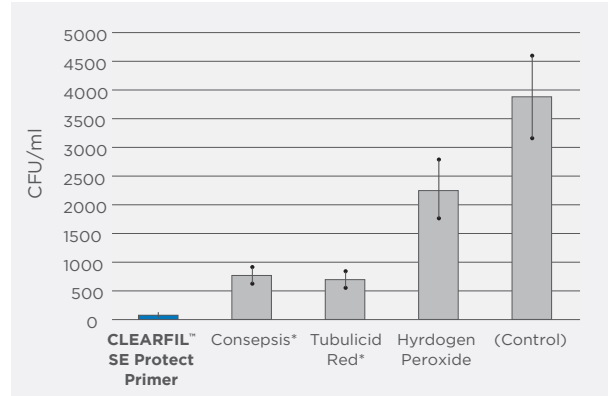


Fig. 1 Number of Bacterial Recovery: Data from M. Türkün et al. Am. J. Dent., Vol. 19, 166-170, 2006.

\*Not a registered trademark of Kuraray Co., Ltd.

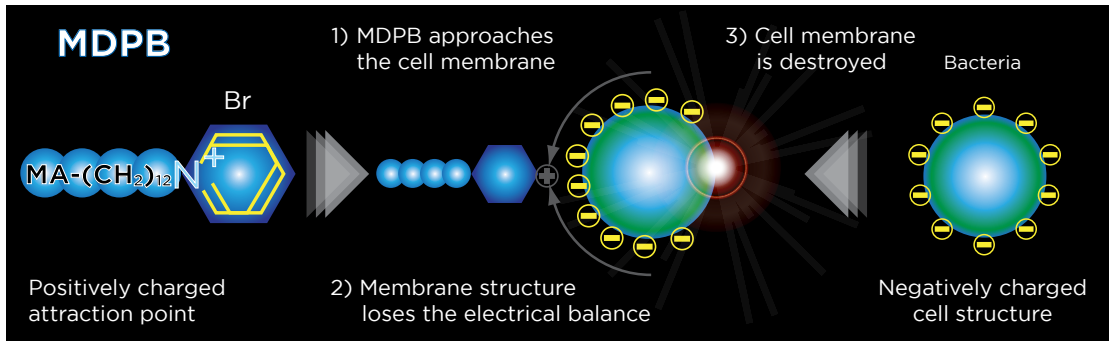
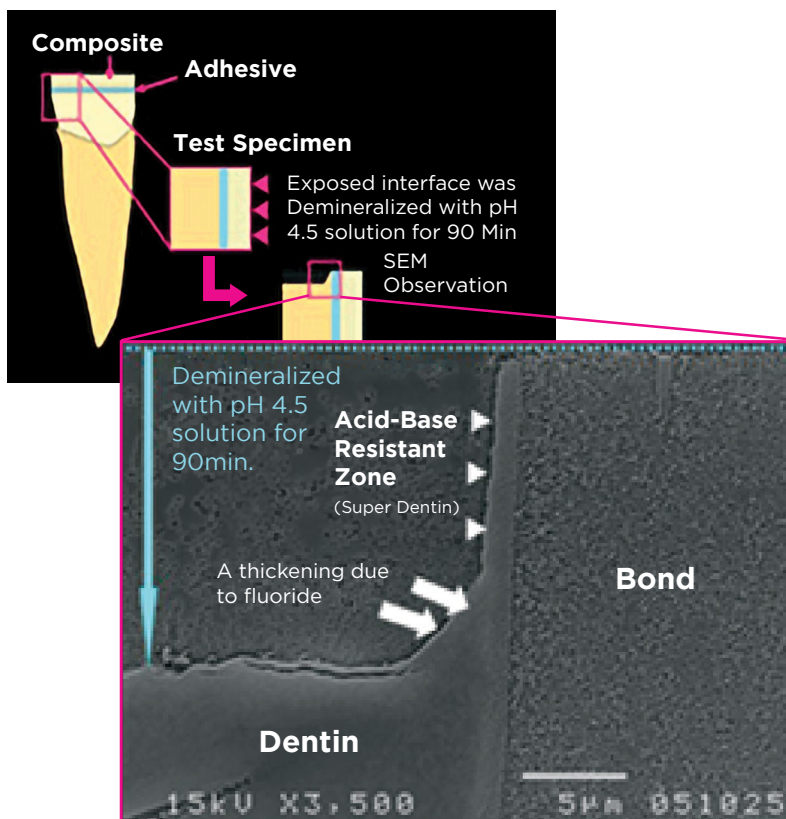


Fig. 2 The bactericidal mechanism of MDPB is presumed to be similar to the well-known antibacterial agent CPC (Cetyl pyridinium chloride), which is in many toothpastes and mouth rinses.



## Fluoride-Releasing

CLEARFIL™ SE Protect contains a patented<sup>\*\*\*</sup>, specially treated sodium fluoride (NaF); the NaF in CLEARFIL™ SE Protect is coated with a unique polymer capsule that allows release of the NaF while the bonding layer physical properties, including strength, are maintained.

CLEARFIL™ SE Protect makes an “acid-base resistant zone” (called Super Dentin) interface between the bond and dentin behind the hybrid layer (Fig. 3, SEM image), as a result of the fluoride-release. Etch & rinse (total-etch) products like Adper Single Bond\* cannot make this zone<sup>3) 4)</sup>. This zone is 1.2µm which is thicker than the hybrid layer and very important for resisting the acid generated by bacteria if microleakage does occur<sup>3) 4)</sup>.

Fig. 3 SEM image after soaking in a mild acid condition: Courtesy of G. Inoue, phases. T. Nikaido and J. Tagami, Tokyo Medical and Dental University, Japan

3) K. Waidyasekera, J. Tagami et al., J. Dent (37), 604-609, 2009  
4) T. Nikaido, J. Tagami et al., Biomed Mater Eng. 2009;19(2-3):163-71

\*\*\* Patent number: US5908879

\*Not a registered trademark of Kuraray Co., Ltd.

# Features from CLEARFIL™ SE BOND for Predictable Treatment

## Virtually No Post-Operative Sensitivity

Studies evaluating post-operative sensitivity of CLEARFIL™ SE Protect were published by Dr. Türkün, Ege Univ. School of Dentistry (Turkey) and THE DENTAL ADVISOR. The results reported that no postoperative sensitivity was experienced during one year<sup>5)</sup> and during 6 weeks<sup>6)</sup> evaluation period, respectively. The image in Fig. 4 was created using Transmission Electron Microscopy (TEM) technology. It clearly shows that CLEARFIL™ SE Protect bonds strongly to dentin. No gaps is a key factor in preventing post-operative sensitivity.

5) L. S. Türkün et al. JADA Vol. 136, 657-664 2005  
6) The Dental Advisor, Vol. 21, No. 8, Oct. 2004

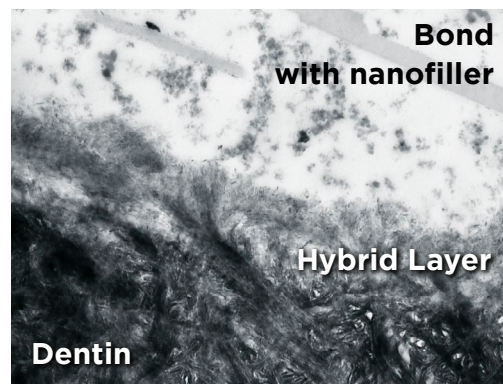
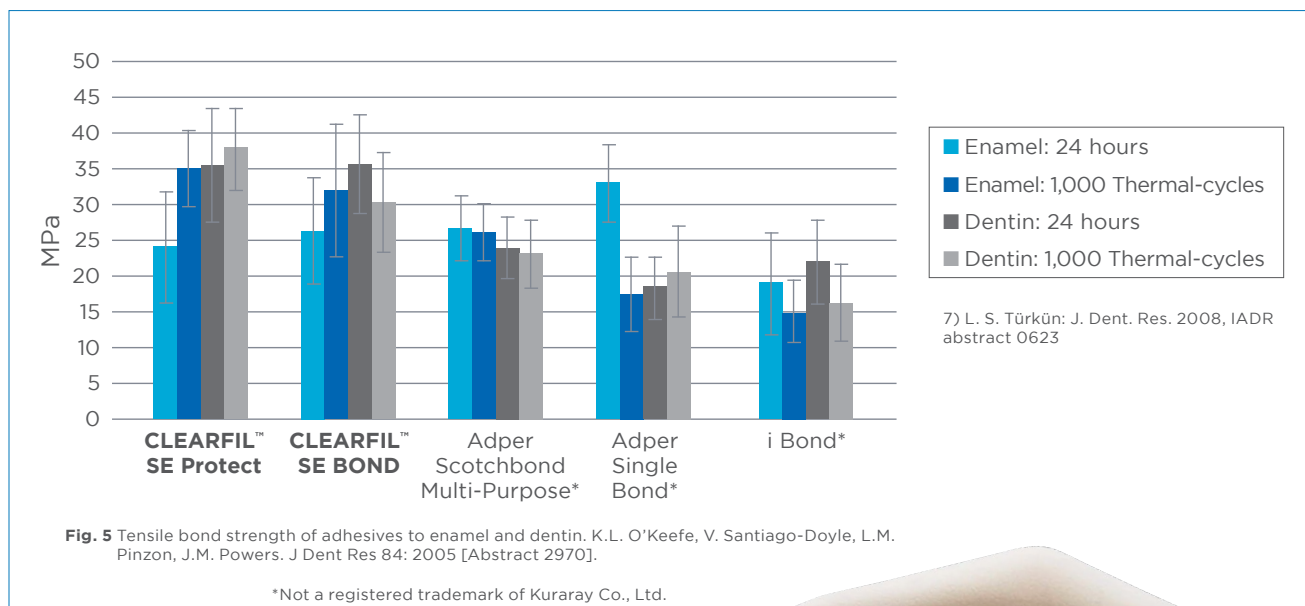


Fig. 4 TEM Micrograph: Courtesy of Dr. Hidehiko Sano, et al., Hokkaido Univ. Japan

## Superior Bond Strength and Durability

The test results of tensile bond strength (Fig. 5) show that CLEARFIL™ SE Protect has clear advantages regarding bond strength and durability compared with 3- or 2-step total-etch (etch and rinse) bonding agents, such as Adper Scotchbond Multi-Purpose\* (3-step) or Adper Single Bond\* (2-step), and 1-step self-etch such as i Bond\*. In addition, CLEARFIL™ SE Protect showed excellent clinical performance in high stress bearing areas for at least five years<sup>7)</sup>.



## SE Protects Your Patients!

### Features from CLEARFIL™ SE BOND

- Virtually no post-operative sensitivity
- Excellent bond strength for enamel and dentin
- Fast and simple procedure with low technique sensitivity

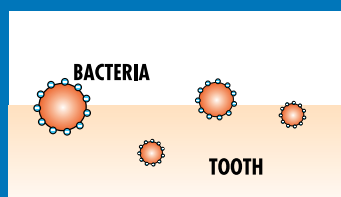
### Advanced New Features

- Antibacterial cavity cleansing effect
- Fluoride-releasing properties
- Higher, more durable bond than CLEARFIL™ SE BOND

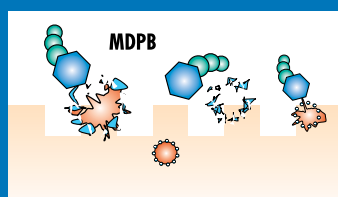
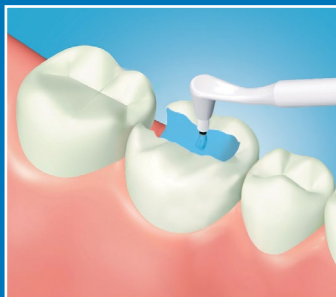


# Basic Procedure

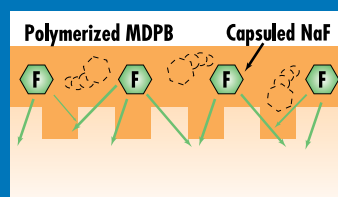
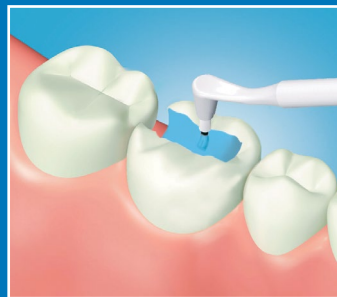
## Prepared Tooth



## Primer



## Bond



## Restoration



- Apply **PRIMER** and leave for 20 sec.
- Dry with gentle air flow
- Apply **BOND**
- Air flow gently
- Light-cure for 10 sec.

## Ordering information for CLEARFIL™ SE Protect



### #2870-KA Standard Kit

- 1-Bond (6ml)
- 1-Primer (5ml)
- Kit Accessories:**
- 2-Brush tip handles
- 1-Mixing Dish
- 1-Light-Blocking Plate
- 1 Outer case
- 100-Disposable brush tips



### #2872-KA Value Kit

- 3-Bond (6ml)
- 3-Primer (5ml)
- Kit Accessories:**
- 2-Brush tip handles
- 1-Mixing Dish
- 1-Light-Blocking Plate
- 1 Outer case
- 300-Disposable brush tips



- #2881-KA**  
Bond Bottle  
1-Bond  
(5ml each)



- #2882-KA**  
Primer Bottle  
1-Primer  
(6ml each)

## YOUR CONTACT

### Kuraray America, Inc.

32 Old Slip Phone (800) 879-1676  
Floor 7 Fax (888) 700-5200  
New York, NY 10005 E-mail info@kuraraydental.com  
Website www.kuraraydental.com

- Before using this product, be sure to read the Instructions for Use supplied with the product.
- The specifications and appearance of the product are subject to change without notice.
- Printed color can be slightly different from actual color.

"CLEARFIL" is registered trademark or trademarks of KURARAY CO., LTD.



**Kuraray Noritake Dental Inc.**

1621 Sakazu, Kurashiki, Okayama 710-0801, Japan

**R Only**

