The new generation self-etching bonding system

CLEARFIL SE BOND incorporates a new-generation version of the proven self-etching primer found in CLEARFIL LINER BOND series, plus a simple, rapid curing bond component. CLEARFIL SE BOND is a two-step, light-curing bonding system that significantly reduces procedural time, while still providing excellent strength and sealing performance for light-cured restorations. CLEARFIL SE BOND is suitable for the following restorative procedures:

- Direct filling restorations using light-curing composite or compomer
- Cavity sealing as a pretreatment for indirect restorations
- Treatment of hypersensitive and/or exposed root surfaces
- Intraoral repairs of fractured facing crowns made of porcelain, hybrid ceramics or composite resin using light-curing composite
- Surface treatment of prosthetic appliances made of porcelain, hybrid ceramics or cured composite resin
CLEARFIL SE BOND is composed of two, single-liquid components: self-etching PRIMER and light-cured BOND. No mixing is required before application. The self-etching PRIMER simultaneously etches and conditions dentin and cut enamel in one simple step. After applying the PRIMER and allowing it to sit briefly, the BOND is then applied and light-cured.

CLEARFIL SE BOND is a true two-step bonding system, meaning no separate acid-etching step is performed*, and no time-consuming rinsing (and attention to surface moisture levels) is required. Both procedural steps are fast: the self-etching PRIMER is applied for 20 seconds, and the BOND light-cured for 10 seconds.

* Uncut enamel requires phosphoric acid etching.

**Comparison of Procedural Steps**

The following table shows the comparison of procedural steps with wet bonding systems.

<table>
<thead>
<tr>
<th>Bonding System</th>
<th>PRIMER</th>
<th>BOND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-etching primer</td>
<td>Apply PRIMER and leave for 20sec</td>
<td>Apply BOND and distribute evenly with mild air flow for 10sec</td>
</tr>
<tr>
<td>Wet bonding system</td>
<td>No rinse</td>
<td>Light-cure</td>
</tr>
<tr>
<td>Single Bond</td>
<td>Disperse, apply 20sec, dry, Light-cure 10sec</td>
<td>Disperse, apply 2 times, dry, Light-cure 10sec</td>
</tr>
<tr>
<td>One Step</td>
<td>Disperse, apply 10sec, dry, Light-cure 10sec</td>
<td>Disperse, apply 2 times, dry, Light-cure 10sec</td>
</tr>
<tr>
<td>Prime &amp; Bond NT</td>
<td>Disperse, apply 10sec, dry, Light-cure 10sec</td>
<td>Disperse, apply 2 times, dry, Light-cure 10sec, Dry</td>
</tr>
<tr>
<td>Gluma One Bond</td>
<td>Disperse, apply 20sec, dry, Light-cure 20sec</td>
<td>Disperse, apply 20sec, Dry, Light-cure 20sec, Apply,dry</td>
</tr>
<tr>
<td>Sylco Single Component</td>
<td>Disperse, apply 15sec, dry, Light-cure 20sec, Apply,dry</td>
<td>Disperse, apply 20sec, Dry, Light-cure 20sec, Apply,dry</td>
</tr>
</tbody>
</table>

CLEARFIL SE BOND has a unique new Outer case that allows quick, single-handed delivery of both PRIMER and BOND. The Outer case is easy to store and also minimizes finger contact with the contents, which helps prevent possible skin irritation.
CLEARFIL SE BOND PRIMER and BOND both contain the proven adhesive monomer MDP (10-Methacryloyloxydecyl dihydrogen phosphate), as used in the PANAVIA and CLEARFIL LINER BOND series. MDP provides high bond strength and long-term bond durability to enamel, dentin and base metals. The BOND component of CLEARFIL SE BOND contains approximately 10% of microfiller for added strength and stability.

**Bond strength to Bovine Enamel and Dentin**

CLEARFIL SE BOND produces extremely high and durable bond strength to both enamel and dentin.

- Tensile bond strength to bovine enamel and dentin (MPa)

![Graph showing bond strength](image)

**Bond Strength to Human Uncut Enamel**

The results of micro-tensile bond tests to uncut (unground) human enamel are shown here. CLEARFIL SE BOND—without phosphoric acid etching—shows bond strength to uncut enamel equal to or exceeding that of a "wet bonding" system. This suggests that CLEARFIL SE BOND will perform well even if small sections of uncut enamel are present in a preparation.

**Bond Strength to Compomer Restoratives**

CLEARFIL SE BOND provides high bond strength to compomer restoratives as well as composite resin restoratives. In this test, the bond strength of compomer restoratives to enamel and dentin when bonded with CLEARFIL SE BOND exceeded those obtained when the restorative manufacturers' recommended bonding systems were used.

- Tensile bond strength to bovine enamel and dentin (MPa)

![Graph showing bond strength](image)

**Marginal Sealing**

Microleakage testing results of 15 human molars with V-shaped defects, restored using CLEARFIL SE BOND and thermocycled, are shown here. Note that microleakage could not be observed in any of the enamel interfaces, and that the dentin interfaces all showed zero or minimum microleakage. Exceptional marginal sealing performance of CLEARFIL SE BOND translates into long-term strength and excellent aesthetics with light-cure restorations.

**CLEARFIL SE BOND results**

<table>
<thead>
<tr>
<th>Enamel</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentin</td>
<td>12</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

After thermocycled: 800 times, 5°C - 55°C

Kit components:
- Primer (6 ml)
- Bond (5 ml)
- Outer case
- Disposable brush tips (50 pieces x 2)
- Brush tip handle
- Mixing plate
- Light-blocking plate

Indications:
- Direct filling restorations using light-curing composite or compomer
- Cavity sealing as a pretreatment for indirect restorations
- Treatment of hypersensitive and/or exposed root surfaces
- Intraoral repair of fractured facing crowns made of porcelain, hybrid ceramics or composite resin using light-curing composite
- Surface treatment of prosthetic appliances made of porcelain, hybrid ceramics or cured composite resin

Versatile dual-cure bonding system

CLEARFIL LINER BOND 2V is suitable for a wider range of applications thanks to its dual-cure capability (with the addition of BOND LIQUID B).

Indications:
- Light-curing composite restorations
- Chemical-curing composite restorations
- Hypersensitivity treatment
- Pretreatment cavity sealing for indirect restorations
- Bonded amalgam restorations
- Intraoral repair of fractured porcelain restorations using light-curing composite
- Cementing porcelain or composite inlays/onlays using resin cement
- Bonding to metal and porcelain when used with CLEARFIL PORCELAIN BOND ACTIVATOR and ALLOY PRIMER

Available Separately
- Chemical-cure component CLEARFIL LINER BOND 2V Bond Liquid B (3ml)

Related products
- Light-curing universal composite CLEARFIL AP-X
- Light-curing low viscosity composite CLEARFIL LINER BOND 2 PROTECT LINER F (2ml)
- Silane coupling agent CLEARFIL PORCELAIN BOND ACTIVATOR (4ml)
- Metal adhesion primer ALLOY PRIMER (5ml)

NOTE: Please read instructions for use thoroughly before using the products. CLEARFIL and PANAVIA are trademarks of Kuraray Co., Ltd. Single Bond and F2000 are trademarks of 3M Dental Products, One Step is a trademark of Bisco, Inc. Prime&Bond NT and Dynact are trademarks of Dentply International Inc. Gluma, One Bond is a trademark of Heraeus Kulzer. Syntac Single Component and Compoglass F are trademarks of Vivadent Ets. Warranty: All data, other than quoted articles, herein is based on actual measurements performed by Kuraray Co., Ltd. All information contained herein is presented in good faith and without warranty. Kuraray Co., Ltd. will replace any product that is proven to be defective. Neither Kuraray Co., Ltd. nor the distributor accepts liability for any loss, damage, direct, consequential or special, arising out of the application or use of or the inability to use these products. Before using, the user shall determine the suitability of the products for the intended use and the user assumes all risk and liability whatsoever in connection therewith.