

## 62-15 Clearfil SE Bond (Project 00-43) (04/01)

Clearfil SE Bond is a bonding agent with 10 percent microfiller that consists of two bottles: a self-etching primer and a light-cured bonding resin. The product is one of a handful of true two-step dentin bonding agents. When applied to dentin or cut enamel, no separate acid etching step is necessary. Instead, the etching is accomplished by applying the primer for 20 seconds to the tooth structure and then drying it with a gentle stream of compressed air. To finish applying SE Bond, the bonding resin is placed, gently air thinned, and then light activated for 10 seconds. It should be noted that uncut (i.e., unprepared) enamel must be separately etched with phosphoric acid if Clearfil SE Bond is to be applied to it.



The product comes with instructions and graphics-containing cards describing its use for five types of bonding: bonding light-cured composite or compomers; cavity sealing as a pretreatment for indirect restorations; sealing of hypersensitive or exposed root surfaces; intraoral repairs of fractured hybrid ceramics, composites, or porcelain; and surface treatment of hybrid ceramic, composite, or porcelain prostheses prior to cementation.

Clearfil SE Bond comes with an innovative one-piece plastic dispenser/holder case into which the primer and bond bottles are placed. A plastic top covers the exposed ends of the bottles when not in use. To use the case, the top of the case is removed and the user presses a flexible button on the side of the case next to the desired bottle. This, in turn, exerts pressure on the bottle, which then dispenses a drop of liquid. Clearfil SE Bond is shipped in a small cardboard box with a top-opening lid.

### Manufacturer:

Kuraray America, Inc.  
200 Park Avenue  
New York, NY 10166-3098  
(800) 879-1676  
(212) 986-2230  
(212) 867-3543 FAX  
[www.kurarayamerica.com](http://www.kurarayamerica.com)

### Suggested Retail Price:

\$109.00 Clearfil SE Bond (item number 1970KA) contains:  
-one 6-mL bottle of SE Bond Primer  
-one 5-mL bottle of SE Bond Bond  
-one holder/dispenser case  
-accessories (e.g., brush handle, disposable tips, mixing dish/well, light-blocking cover)

### Government Price:

\$65.40 Clearfil SE Bond (item number and contents as described above)

### ADVANTAGES:

- + Fast to apply when bonding to dentin and cut (i.e., prepared) enamel.
- + Application process is simple and straightforward.
- + Produces extremely strong bond to dentin (37.6 MPa).
- + Research by outside evaluators indicates strong bond to cut (i.e., prepared) enamel without the need for separate phosphoric acid etching.
- + Does not need to be applied to "moist" dentin.
- + Comes with an innovative bottle holder/dispenser.
- + Expiration dates and lot numbers are stamped on individual components.

- + Is provided with clear, easy-to-understand, graphics-containing, laminated instruction cards.
- + Recommended storage conditions are provided on box.
- + Instructions clearly describe product indications and use.

**DISADVANTAGES:**

- Not provided with the components necessary to do all the types of bonding described in instructions.
- Not recommended for bonding indirect restorations or amalgam.
- Requires separate enamel etching step when bonding to uncut (i.e., unprepared) enamel.
- Not available in a unit-dose form.
- Users expressed the desire for a different type of applicator.
- Lot number on box differed from the number stamped on the primer and bond bottles.
- Not shipped with a Material Safety Data Sheet (MSDS).

**SUMMARY AND CONCLUSIONS:**

Clearfil SE Bond is one of the few self-etching primer bonding products on the market. Because it uses a self-etching primer, the dentin need not be "moist" when it is applied. This is advantageous because many clinicians are unsure of the degree of "moistness" dentin should have at the time of bonding. Application is straightforward but requires five steps. When bonding to uncut (i.e., unprepared) enamel, separate acid etching with phosphoric acid is necessary. This adds time to the clinical procedure. Although the instructions describe five indications for using Clearfil SE Bond, the components necessary to do four of these procedures are not included in the kit (e.g., Clearfil Liner Bond 2 Protect Liner F, K-Etchant Gel, Alloy Primer, and Clearfil Porcelain Bond Activator). Because it is solely light-cured, Clearfil SE Bond is not recommended for bonding indirect restorations. Its bond strength to dentin is very high: in fact, higher than all products previously evaluated by DIS with the exception of Prime & Bond NT (Dentsply/Caulk), with which it was not significantly different. While not shipped with the product, SE Bond's MSDS is available through the Kuraray web site. The product comes with disposable brushes and nondisposable brush handle for applying it. Users wanted a disposable applicator for better infection control. For the simple bonding procedures for which it is can be used as provided, **Clearfil SE Bond** is rated **Recommended** for use by the federal dental services.