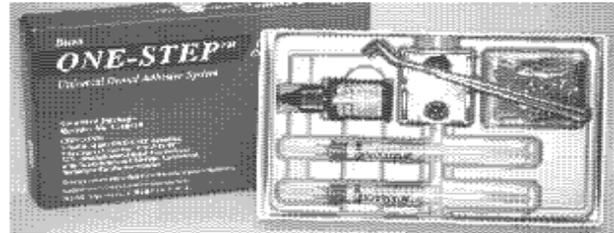


48-22 One-Step Universal Dental Adhesive System (Project 95-28) (02/96)

One-Step Universal Dental Adhesive System is a "one-bottle" dentin bonding agent recommended by the manufacturer for fifteen different types of clinical bonding procedures. The product is supplied with two syringes of "Uni-Etch," a 32% phosphoric acid semi-gel etchant that is used for etching dentin and enamel simultaneously. Following rinsing, the etched tooth surface is very lightly dried in order to prevent desiccation. One-Step Adhesive is then applied in two consecutive coats and thoroughly dried to



volatilize the solvent and water. The manufacturer recommends that the treated tooth surface be carefully inspected to ensure that it appears glossy. If glossy, the bonding agent is light activated for 10 seconds. (For class V situations, the manufacturer recommends that the Adhesive be reapplied, dried, and light activated). Any adhesive remaining on the brush tip is then applied and lightly dried with air. Following this step, composite resin is incrementally placed and light activated to restore the lesion. If One-Step is being used for other bonding purposes (e.g., cementation of metal or porcelain restorations, amalgam bonding, porcelain repair), placement procedures for the bonding agent may vary slightly. The product is supplied with a plastic brush handle, brush tips, dispensing well, and booklet of instruction cards.

Manufacturer:

Bisco Dental Products
1500 West Thorndale Avenue
Itasca, IL 60143
(800) 247-3368
(708) 773-6633
(708) 773-6949 FAX

Suggested Retail Price:

\$80.00 One-Step Standard Package (product number U-10010)
2 syringes Uni-Etch 32% phosphoric acid gel
1 bottle One-Step Adhesive (4 mL)
1 brush handle
50 brush tips
30 syringe tips
plastic dispensing well
\$56.00 Refill bottle of One-Step Adhesive (4 mL) (item number U-1101P)

Government Price:

\$68.00 One-Step Standard Package (product number and contents as listed above)
\$47.60 Refill bottle of One-Step Adhesive (4 mL) (item number as listed above)

ADVANTAGES:

- +For most bonding procedures, One-Step takes less time to apply than other products evaluated by DIS.
- +Etchant is used to simultaneously condition enamel and dentin; this simplifies the etching process.
- +Has a wide range of clinical uses.
- +Is provided with laminated instruction cards that use graphics to depict product application.
- +Packaged in a small box that takes up little storage space.
- +Expiration date is stamped on Adhesive.
- +No mixing of components is required.
- +Recommended storage conditions are listed on outside of box.
- +Etchant contains benzalkonium chloride which may have an antimicrobial effect on tooth structure.
- +Is provided with a Material Safety Data Sheet (MSDS).

DISADVANTAGES:

- Is not an all-inclusive bonding product; does not contain hydrofluoric acid, silanating solution, or metal opaquer, all of which are called for in product instructions.
- Bond strength measured by DIS was considerably less than the value claimed by the manufacturer.
- Product has an acetone odor that some clinicians and patients may find objectionable.

SUMMARY AND CONCLUSIONS:

One-Step is a one-component bonding product that clinicians found easy to use and relatively quick to apply. Although it is advertised as a "one-step" bonding agent, its application requires enamel and dentin etching with a 32% phosphoric acid etchant. The One-Step Adhesive, however, does simplify the application process because it is both primer and unfilled resin in one bottle. The product has a wide range of clinical uses and comes with a booklet of summarized instructions that is complete and user friendly. One-Step's bond strength measured by DIS was comparable to values for other dentin bonding products, but it was less than the value claimed by Bisco. Although the product requires multiple applications in certain clinical situations, it is very quick to apply for most bonding procedures. One of the main shortcomings of One-Step is that it is not an all-inclusive product. Although Bisco recommends it for a wide range of bonding procedures, it does not contain components necessary to accomplish the bonding. For example, amalgam bonding with One-Step is described in product instructions, but the procedure can not be accomplished without purchasing Resinomer, a dual-cured resin composite from Bisco. One-Step is comparable in cost to other currently-popular bonding products. **One-Step** is rated **Acceptable** for use by the federal dental services.