

67-13 Tyrian SPE Unit-Dose/One-Step Plus System (Project 02-27) (12/02)



Tyrian SPE is an ethanol-based, self-etching, two-solution primer that is applied to dentin and to cut/uncut enamel prior to the use of Bisco's fifth-generation dentin bonding product, One-Step Plus. In effect, it replaces the use of phosphoric acid as an etchant. Tyrian SPE is available in an innovative unit-dose container that is used to mix the two solutions prior to placement. It is also sold in two separate bottles. Provided with Tyrian SPE are plastic foam pellets, plastic applicators, and a bottle of One-Step Plus. The product is recommended by Bisco for a number of clinical applications, including: prior to cementation of posts, indirect restorations, and orthodontic brackets; desensitization of hypersensitive tooth structure; and prior to placing a resin composite.

Tyrian SPE is used by mixing the two solutions using the unit-dose capsule, and then applying one to two coats of the mixed solution for 10 seconds to the dried enamel and/or dentin. A foam pellet is then used to blot the preparation dry. It should be noted that when mixed, Tyrian SPE is purple; the color disappears as the primer is blotted. The bottle of One-Step Plus is then shaken for up to five seconds, and the bonding agent is applied to the preparation in two coats. The procedure is finished by air drying the treating area for 10 seconds and then light activating it for another 10 seconds.



Manufacturer:

Bisco, Inc.
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(847) 534-6000
(800) 959-9550 FAX
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Suggested Retail Price:

\$115.00 Tyrian SPE (item number U-2220K), includes:
-25 0.15-mL unit dose containers of Tyrian SPE
-one 6-mL bottle of One-Step Plus
-accessories
-instructions
-Material Safety Data Sheet (MSDS)

Government Price:

\$69.00 Tyrian SPE (contents and item number as listed above)

ADVANTAGES:

- + No separate enamel etching step is required by instructions.
- + Can be applied to dried tooth structure, which helps standardize application procedure.
- + Purple color makes it easy to see during placement.
- + Packaged in innovative, self-mixing, unit-dose capsule.
- + Provided with all components necessary to perform clinical applications described in instructions.
- + Comes with nicely-done summary instruction card.
- + Expiration dates and lot numbers are stamped on individual components.
- + Is shipped with a Material Safety Data Sheet (MSDS).

DISADVANTAGES:

- Bond strength was significantly lower than values measured for a number of dentin bonding agents recently evaluated by DIS.
- Takes longer to apply than several other self-etching primer products.
- Requires more steps than many other self-primer products.
- Components must be mixed prior to placement.
- Some patients may object to the product's odor.
- Relatively expensive per mL.

SUMMARY AND CONCLUSIONS:

Tyrian SPE/One-Step Plus performed adequately during the laboratory and clinical-user evaluation, but did not distinguish itself by having significant advantages compared to other recently-evaluated self-etching products. In fact, users felt it was less straightforward and not as time saving as other products with which they were familiar. Tyrian SPE/One-Step Plus is relatively quick to apply but other similar products are faster. To Bisco's credit, all uses for the product can be performed as called for by the instructions. Also, Tyrian SPE is packaged in an innovative, well-designed, unit-dose, mixing capsule. Another positive feature of the product is that it eliminates the need to ensure the dentin and enamel are in a particular state of "moistness" prior to application. This is advantageous because many clinicians are unsure of the degree of moisture tooth structure should have at the time of bonding. The product is more expensive per mL than four other popular products with which it was compared. Although it performs its basic functions adequately, other products currently available are easier and faster to apply, require fewer steps, and are less expensive. **Tyrian SPE/One-Step Plus** is rated **Marginal** for use by the federal dental services.