

BLISS ETCH™



SCOPE

This document provides an in-depth description of the background, research, purpose, and function of the Bliss Etch™ no-rinse acid etchant. It serves as a reference to any person wanting to know details about why this product is needed, how it works, and what the expected results are from using it.

NO RINSE, NO PAIN

One of the innovative new approaches in restorative dentistry is the concept of self-etch adhesives. Basically, these are materials that incorporate acrylics with acid functional groups or low potency acids as part of the adhesive formulation. Although these adhesives cut out a few steps, they don't necessarily bond as well - especially on enamel.^{1,2} To keep bond strengths at their optimum, etchant is a preferred approach. Most are familiar with etchants used in dentistry - phosphoric acid in substantial concentrations that are applied for 15-20 seconds, then rinsed away.

Why do we relay this? The self-etch adhesives seek to reduce the number of steps in a restoration and reduce sensitivity. Although keeping the acid etch step doesn't help that cause, Bliss Etch™ does take a significant step in that direction. Bliss Etch™ is a no-rinse acid etchant. Bliss Etch™ is able to do this because it does not incorporate phosphoric acid. Instead, we use a novel organic acid that has the same effect of clearing away the smear layer without the need of the potent concentration of phosphoric acid that gets rinsed away. Bliss Etch™ is one of very few etchants on the market that doesn't contain phosphoric acid.

We took the utility of a no-rinse etch one step further - glutaraldehyde. It is well known that glutaraldehyde reduces post-operative sensitivity when applied prior to or in conjunction with a bonding agent. However, the challenge has been that bonding agents get weakened when glutaraldehyde is added to the composition and glutaraldehyde is destroyed by phosphoric acid if it is combined with the etchant. As we stated before, Bliss Etch™ doesn't contain phosphoric acid. This allows us to include 5% glutaraldehyde as part of a no-rinse preparatory treatment just prior to bonding. Now, you can get excellent sensitivity management in fewer steps with a safer material. What affect does Bliss Etch™ have on bond strengths? Nothing significantly different from other glutaraldehyde systems currently available, so there's no risk of having restorations failing to stick. Bliss Etch™ allows you to etch dentin or enamel while desensitizing, all in a single step.

SUMMARY

Fewer treatment steps, excellent sensitivity control, no hazardous phosphoric acid. Bliss Etch™ is the next step in comprehensive restorative dentistry.

References

1. Pashley DH, Tay FR. **Aggressiveness of contemporary self-etching adhesives: Part II: etching effects on unground enamel.** *Dent Mat*, Volume 17, Issue 5, Pages 430-444 (September 2001).
2. Frankenberger R, Tay FR. **Self-etch vs etch-and-rinse adhesives: effect of thermo-mechanical fatigue loading on marginal quality of bonded resin composite restorations.** *Dent Mat*, Volume 21, Issue 5, Pages 397-412 (May 2005).