



1. BisCover turned yellow or stained after just a few days on the tooth.

Solution: This is the result of inadequate curing. It could be that the curing light had an aging lamp that needs replacement, an LED curing light was used or the light was held too far from the target surface. Under cured resin will give the appearance of being cured, but may not be totally cured. Use a coarse polishing disc, 30 flute carbide bur or a fine diamond bur to remove the stained BisCover and retreat the tooth as directed.

2. BisCover chipped off or debonded.

Solution: Several potential problems:

- a. **Was it bonded to dentin?** If so, you should use One-Step before placing BisCover. Class 5 and cervical lesions may have a margin in dentin. After polishing the restoration with discs or burs, exposed dentin may be present. Therefore One-Step must be used to infiltrate the exposed tubules before applying BisCover.
- b. **Was it bonded to porcelain?**
If so, you should sandblast, use hydrofluoric acid [4% for 4 minutes], Porcelain Primer, One-Step **then** place BisCover. BisCover does not adhere to porcelain without these additional steps.
- c. **Did you use the viscosity modifier?**
A thick layer is more prone to chipping and failure. This is true for almost any material such as paint or a fine polyurethane finish on wood. Our personal observation was the undiluted version has more difficulty properly wetting the dry tooth/composite surface. While we recommend the viscosity modifier for every application, there will be those that prefer the undiluted version. When used without the viscosity modifier, the resin must be properly thinned out with a bristle brush.
- d. **Streaks or rows in the BisCover?**
Be sure to use the bristle brushes provided in the kit. While Microbushes are fine for many procedures, they tend to leave “corn rows” or waves, especially with undiluted BisCover. That is, an uneven layer results which may have a tendency to fail.
- e. **Did you etch the surfaces first?**
Even if you are placing BisCover only on composite, we would highly recommend etching the surface first. This will not truly etch the surface, but phosphoric acid is an excellent cleanser.
- f. **Did you use Tyrian instead of phosphoric acid? If so how was it used?**
If Tyrian is used, it must be rinsed off before applying BisCover. This is the only exception to using Tyrian.
- g. **Did you use wet bonding techniques?** This is not a wet bonding technique. Dry bonding is necessary when applying a hydrophobic resin like BisCover (the exception is discussed in section 2a above where One-Step would be applied first).

3. Only peripheral portions of the BisCover chipped off or debonded.

Solution: This problem has been reported only on larger teeth. Thus we are inclined to believe that the dentist tried to cure a large surface with only one curing cycle. In fact, central incisors, for example, may require curing of the gingival one-half first, then an additional curing cycle covering the incisal one-half of the facial surface. This is also related to the size of the curing probe. Smaller diameter tips, such as Turbo tips, may require 2-3 exposure cycles depending the involved tooth surface.

4. Was BisCover aggressively air thinned?

Solution: It should be gently air thinned when used without the viscosity modifier. In fact, the best final surface is obtained by using the viscosity modifier and placing one uniform thin layer over the surface, then allow it to air dry for 15-20 seconds. Do not over-manipulate the resin with the bristle brush when using the viscosity modifier. The heat of the tooth will help evaporate the solvent leaving a nice, uniform, undisturbed surface for curing. Of course, this requires proper isolation free from contamination. If an air syringe must be used, a gentle stream of air can be used.

5. What curing light was used?

Solution: Only a tungsten-quartz-halogen (TQH) light (e.g. Demetron 501) will completely cure BisCover.

At this time, most LED and argon curing lights WILL NOT cure BisCover. The only exception is Ultra-Lume 5 LED unit (Ultradent). Some PAC lights now have broad spectral outputs and may cure BisCover.

6. Was BisCover bonded to old composite?

Solution: Consider this a new bonding procedure. Since the surface of the aged composite is microscopically contaminated, it needs to be reduced to a clean substrate. Clean the surface aggressively with pumice, a 30 flute carbide bur or fine diamond bur. Etch the composite and surrounding enamel/dentin for 15 seconds. Rinse, leaving any exposed dentin moist. Apply One-Step as directed, light cure then proceed with placement of BisCover. Composite Activator could be used, but only on the composite. Thus One-Step would still need to be used for the surrounding enamel and dentin.