

CEMENTING (BONDING) OF METAL FREE AND METALLIC RESTORATIONS USING ADHESIVE RESIN CEMENT

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TREATMENT OF THE METAL-FREE RESTORATIONS, PORCELAIN LAMINATE VENEER, ALL CERAMIC CROWNS, INLAYS / ONLAYS

Internal surface of the restoration should have been etched with hydrofluoric acid by the lab.

After trying in the restoration in the mouth, clean and acidify the internal surface of the restoration with phosphoric Acid for 15 secs. Wash off the phosphoric acid with air and water syringe. Dry the internal surface of the restoration.

Then apply silane to the internal surface of the restoration and let it remain for 1 min. Evaporate solvent in the silane with the air syringe. **DO NOT Wash away the silane with water.**

Mix 1 drop of prime and bond N.T. with 1 drop of self-cure activator in a dappen dish or still better in the applicator dish and apply to the internal surface of the restoration for 20 secs. Now evaporate excess acetone (solvent) with air syringe for 5 secs. Taking care to see no water or oil comes out of the syringe when blowing. **DO NOT Light cure.** The adhesive will be cured with the cement. Recent research by Reality 2001 has shown that bond strengths are higher when Prime & Bond N.T. is cured with the cement as compared to procuring on the tooth or on the restoration.

TREATMENT OF THE PREPARED TOOTH

Etch the prepared tooth for not more than 10-15 seconds with phosphoric acid. If no enamel is

present, it is preferable not to etch the dentin. Prime & Bond N.T. contains 'Penta' which acts like a self etching Primer and can actually etch dentin.

Wash with air and water syringe for 5-10 seconds.

Do not over dry with air syringe. Just take a pellet of cotton roll and remove visible droplets of water. If using air syringe, give just one blast of air. No visible droplets of water should be present.

Mix 1 drop of Prime and Bond N.T. with one drop of self cure Activator, in dappen dish or still better in applicator dish and quickly apply to the prepared tooth surface, and gently rub for 20 seconds with an applicator tip taking care to see the tooth surface is always soaked with the adhesive by taking fresh amounts from the applicator dish.

Now gently evaporate excess acetone (solvent) with air syringe for 5 seconds. Taking care to see no water or oil comes out from the syringe when blowing. **DO NOT Light cure.** The adhesive will be cured with the cement.

Now mix equal lengths of base and catalyst from the syringe supplied. Take 2 cm. long of catalyst on the glass slab (this quantity will be enough for 2 crowns), and mix thoroughly.

Place mixed cement inside the two crowns and guide them into place on the prepared tooth and hold them in place with your fingers. Remove excess cement with an artist brush or sable hair brush or cotton pellet from cervical and between teeth. Use dental floss interproximally.

Now light cure with a good light both facially,

lingually and proximally in each area for 40 seconds.

Calibra is a dual cured cement and so it is important that it should be light cured.

Remove excess cement with sharp scalers or no. 12 surgical blades. The no. 12 surgical blade is specially preferred.

N.B. For bonding metal free laminate veneers which are usually not more than 1 mm. thick, it is not necessary to use dual cure adhesive capacity of Prime & Bond N.T. or Calibra Cement. Do not mix Prime and Bond N.T. with Self Cure Activator – use Prime & Bond N.T. by itself. Also use only the Base Cement of Calibra – do not mix with Catalyst. Do not light cure (precure) Prime and Bond N.T. on the laminate or on the prepared tooth but cure it with the cement.

TREATMENT OF THE METALLIC RESTORATION

- The internal surface of the metallic restoration should be sand blasted with 50 microns aluminium oxide particles by the lab.
- Clean and acidify the internal surface of the restoration with phosphoric acid for 15 secs.
- Wash off the phosphoric acid with air water

syringe for 10 secs.

- Dry the internal surface of the metal restoration thoroughly with an air syringe.
- Mix one drop of Prime & Bond N.T. with one drop of self cure activator in a dappen dish or applicator dish and apply it immediately to the internal surface of the restoration for about 5 to 10 secs.
- Do not light cure the adhesive.
- Mix equal lengths of base and catalyst of the cement and immediately apply to internal surface of restoration and guide it to place on the prepared tooth surface.
- Remove excess cement with artist brushes or cotton pellet from margins of restoration and interproximally.
- Exposed margins can be light cured because of the dual cure nature of the cement. It is advantageous and preferable to light cure margins.

N.B. Treatment of the prepared tooth for receiving metallic restorations will be similar to preparation for metal free restorations. (Follow Steps 1-9)