



Reliance Orthodontic Products, Inc.

Orthodontic Bonding Technique Manual

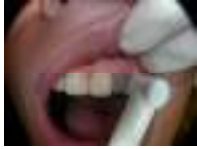
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TOOTH PREPARATION



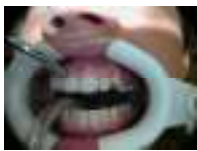
1. Prophylaxis: Using a rotary instrument with a rubber cup or brush, prophyl the enamel surfaces to be bonded with 1st & Final[®] or plain pumice. Do not use prophyl pastes which contain oil because they can leave a film that will inhibit the etch. Special attention should be given to posterior teeth and lingual surfaces because patient hygiene may not be satisfactory and tartar and calculus may be in excess.



2. Rinse thoroughly and dry teeth with oil / moisture free compressed air.



3. Etch: Dispense etching agent onto mixing pad. Etchant may be liquid or gel. Isolate the teeth for etching. With a cotton pledget or brush, dab the etching agent onto the entire area to be bonded. Do not rub the etching agent onto enamel. Allow 30 seconds for etching (60 sec. for deciduous teeth). Avoid placing etching agent on soft tissue.



4. Rinse & Dry: Rinse each tooth with water/air spray for 10 seconds (20 sec. for gel etch) to stop etching process and remove demineralized particles. A thorough rinsing on each tooth is critical. Reisolate and dry teeth thoroughly. The etched area should appear frosty white. If not, re-etch for an additional 20 seconds. If the enamel appears mottled or fluorosed or has been contaminated with saliva, the enamel should be conditioned with Enhance[™] or Assure[®] Resin.

RELIANCE S.E.P.[™] (SELF ETCHING PRIMER)



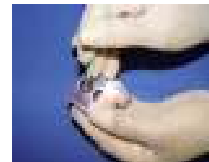
1. Thorough prophylaxis is mandatory.



2. Rinse and dry the enamel.



3. Dispense one full click* of the S.E.P.[™] into the light impervious mixing well. The liquid dispenses in a 1:3 ratio.



4. Mix the dispensed liquids thoroughly and slide the light shield over the well to protect from ambient light. The mixture can be used for up to 6 hours.



5. Using a microbrush, apply a small amount of mixed solution to the enamel and scrub for 5 seconds where the bracket will be applied and slightly beyond.



6. Dry the enamel surface with 2 bursts of compressed air.



7. Apply bracket with a light cure paste.



8. Light cure.

*One click will dispense enough material for one full arch.

KEYS TO SUCCESS WITH SELF-ETCHING PRIMERS

1. Thorough prophylaxis mandatory.
2. Apply a small amount of primer to the tooth surface (thin coat).
3. Longer agitation (5s.) vs. (3s.).
4. After drying, tooth must look “resin” shiny – not “water” shiny.

If there is saliva contamination after application, the process must be repeated.

Assure® Universal Bonding Resin

BONDING TO WET OR DRY, NORMAL OR ATYPICAL ENAMEL:

Prophy, Etch, Rinse and Dry - As prescribed in the TOOTH PREPARATION card.

Application of Universal Bonding Resin - With a brush or sponge pellet apply one coat of Assure® Universal Bonding Resin to each prepared tooth and stroke over. Lightly air dry to ensure evaporation of the solvent. Enamel should appear shiny. If not, apply an additional coat and dry with air. No light curing of the bonding resin is required. Proceed with the application of paste and bracket.

Application of Paste - At this point the appliance can be bonded with any light cure, chemical cure or dual cure paste system without the use of additional bonding resins or sealants. (If Rely·a·Bond® is used, the Rely·a·Bond® Primer must be applied to the conditioned tooth and bracket base.)

BONDING TO PORCELAIN CROWN:

- 1) Thorough Prophylaxis –Rinse & Dry
- 2) Micro-etch crown – Rinse & Dry
- 3) Place Barrier Gel® on the gingival margin to protect soft tissue.
- 4) Place Porcelain Etchant® on crown – leave for 4 minutes. Rinse & Dry.
- 5) Apply 1 *thin* layer of Porcelain Conditioner® – leave for 1 minute.
- 6) Apply 1 coat of Assure® & air dry
- 7) Proceed with application of paste and bracket

BONDING TO A TOOTH WITH A COMPOSITE RESTORATION:

- 1) Thorough Prophylaxis - Rinse & Dry
 - 2) Roughen the composite surface with a fine diamond - Rinse & Dry
 - 3) If there is enamel present – Etch Rinse & Dry
 - 4) Apply one coat of Assure® Universal Bonding Resin and lightly dry with air.
 - 5) Proceed with the application of paste and bracket.
- *When bonding to an acrylic temporary / pontic tooth: follow Steps 1 and 2. Then, use a thin coat of Reliance Plastic Conditioner & lightly air dry. Apply one coat of Assure® Bonding Resin & air dry.*

BONDING TO A METAL SURFACE:

- 1) Thorough Prophylaxis - Rinse & Dry
- 2) Micro-etch metal surface – Rinse and Dry
- 3) If there is enamel present – Etch Rinse & Dry
- 4) Apply 1 coat of Assure® & air dry
- 5) Proceed with application of paste and bracket

*All intra-oral micro-etching (sandblasting) should utilize 50 micron aluminum oxide

*Double the curing time on all non-enamel surfaces when utilizing a light cure adhesive

Assure® PLUS

All Surface Bonding Resin

BONDING TO WET OR DRY, NORMAL OR ATYPICAL ENAMEL: Prophy, Etch, Rinse and Dry - As prescribed in the TOOTH PREPARATION card.

Application of Bonding Resin - With a brush or sponge pellet apply one coat of Assure® PLUS to each prepared tooth and stroke over. Lightly dry with air to ensure evaporation of the solvent. Enamel should appear shiny. If not, apply an additional coat and dry with air. Proceed with application of light cure paste and bracket and light cure. Note: If using chemical cure paste, Assure Plus must be light cured first for 10 seconds.

BONDING TO PORCELAIN CROWN:

- 1) Micro-etch crown – Rinse & Dry
 - 2) Apply 1 *thin* layer of Porcelain Conditioner® –lightly dry with air.
 - 3) Apply 1 coat of Assure® PLUS and air dry
 - 4) Proceed with application of light cure paste and bracket and light cure.
- Note: If using chemical cure paste, Assure Plus must be light cured first for 10 seconds.

BONDING TO A COMPOSITE RESTORATION, ACRYLIC TEMPORARY OR PONTIC TOOTH:

- 1) Roughen the composite surface with a fine diamond bur.
- 2) Apply one coat of Assure® PLUS and lightly dry with air.
- 3) Proceed with application of light cure paste and bracket and light cure. Note: If using chemical cure paste, Assure Plus must be light cured first for 10 seconds.

BONDING TO A METAL SURFACE:

- 1) Micro-etch metal surface – Rinse and Dry
- 2) If there is enamel present – Etch Rinse & Dry
- 3) Apply 1 coat of Assure® PLUS & air dry
- 4) Proceed with application of light cure paste and bracket and light cure. Note: If using chemical cure paste, Assure Plus must be light cured first for 10 seconds.

BONDING TO ZIRCONIA: Sandblast the zirconia surface. Apply one coat of Assure® Plus and light cure for 10 seconds. Proceed with application of light cure paste and bracket and light cure. Note: If using chemical cure paste, Assure Plus must be light cured first for 10 seconds.

Bonding To Fluorosed, Hypocalcified Or Deciduous Enamel

1. Prophyl the tooth with 1st & Final[®] or medium prophyl pumice. Rinse and dry.
2. Acid etch the surface for 30 seconds.
3. Rinse thoroughly and dry.
4. Apply one coat of Assure[®] Universal Bonding Resin and lightly dry with air. If the enamel does not look shiny after 1 coat, apply a 2nd coat and lightly dry with air.
5. Bond bracket onto tooth surface with PadLock[®] light cure adhesive.

NOTE: If PRO SEAL[®] is in the protocol, apply Assure[®] and air dry first. Then place the PRO SEAL[®] and light cure. Proceed with the placement of the bracket with bonding paste.

BONDING TO DENTIN



1. Prophyl.



2. Rinse and dry.



3. Acid etch for 30 seconds.



4. Rinse and dry. Do not desiccate, leave moist.



5. Apply 4 coats of Assure[®] Resin. Lightly dry after last coat. Light cure the Assure for 10 seconds.



6. Apply bracket with paste.

BONDING TO BLEACHED ENAMEL



1. Prophyl teeth with a slurry of Vitamin C and water.



2. Rinse and dry.



3. Acid etch for 30 seconds.



4. Rinse and dry.



5. Apply one coat of Assure[®] Resin. Lightly dry



6.. Apply bracket with adhesive of choice and light cure.

Note: Enhance may be substituted for Assure Universal Bonding Resin, but a bonding resin must be applied before step 6.

Using PRO SEAL® and L.E.D. PRO SEAL®

- APPLICATION:** Dispense a drop or two of PRO SEAL® onto a mixing pad. With a brush, apply a thin uniform layer on the etched enamel surface. Stroke over with the same brush to ensure a thin layer and proper coverage.
If using original PRO SEAL®, cure each tooth for 20 seconds with any corded halogen, plasma or LED curing light in the purple range (390 – 440 nM). If using L.E.D. PRO SEAL®, cure each tooth for 20 seconds with any curing light (440-480 nM).
Note: In order for PRO SEAL® to remain on a normal tooth surface, it must be applied to properly conditioned, dry enamel. Atypical enamel should be first etched and then conditioned with Assure® Universal Bonding Resin, then lightly dried before the PRO SEAL® is applied.
If PRO SEAL® is cured and saliva contamination occurs, the contaminated tooth can be cleaned by applying Assure® Bonding Resin and drying with air.
- REMOVAL OF SEALANT RESIN:** After the adhesive paste has been removed with a Renew® System Bur (#118S, #118L or #218), removal of PRO SEAL® sealant is easy. Use the #383 Renew® System Point on your choice of handpiece. Lightly polish the entire tooth surface with the #383 rubber point where PRO SEAL® has been applied.

Note: If patient will visit the hygienist during treatment, the enamel should not be cleaned with a prophylactic jet as this can remove the PRO SEAL®. Use fine pumice for cleaning.

If not applied in a thin layer or not fully polymerized, LED PRO SEAL® may appear yellow.

Direct Bonding Metal & Ceramic Brackets with a Light Cure Adhesive



1. With a brush, apply a uniform layer of Assure® bonding resin on the etched enamel & air dry. If saliva contamination occurs after this step, simply air dry the excess contamination off the surface - apply another coat of Assure® & air dry. If PRO SEAL® is used, cure the PRO SEAL® prior to placing bracket.



3. Using the syringe tip or spatula, apply the light cure paste and work it into the bracket base by firmly smearing the paste into the mesh. Place on the tooth and press firmly in the desired position.



4. With a metal or ceramic bracket, light cure the first increment from the incisal edge. Be sure to keep close proximity for an initial 1-2 seconds - then physically touch the bracket and finish light curing.



5. Finish the final increment from the gingival, distal, or mesial edge. Once the material has been properly cured, an active arch wire can be placed immediately.

“The 5 Keys to Success with a Light Cure Bonding Adhesive”

1. Light must be of proper intensity.
2. Divide your total curing time into 2 increments, one angle always being the incisal (occlusal).....
”Light behind a picture frame”.
3. Place light director as close to bracket base as possible for 1-2 seconds – then physically touch the bracket to reduce divergent photon release.
4. Be sure light maintains intensity throughout entire curing process.
5. Adequate cure time – Never cure for less than 6 seconds per bracket

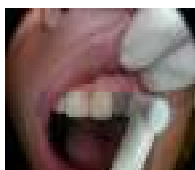
*Remember 10,000 units of energy *

Ex: $1,000\text{mw}^2 = 10$ seconds total cure time
 $500\text{mw}^2 = 20$ seconds total cure time

Bonding a Large Acrylic Appliance



1. Apply a uniform coat of Reliance Plastic Appliance Conditioner to the underside of the acrylic appliance.



2. Prophyl the teeth to be bonded.



3. Acid etch the buccal and lingual tooth surfaces as well as the distal of the last molar. Do not etch the occlusal surface. Rinse and dry thoroughly.*



4. * When bonding to mixed dentition, Assure® Bonding Resin must be applied to the etched deciduous enamel and lightly air dried.



5. Mix equal portions of Excel® Regular Paste A and B. **



6. Apply the paste to the appliance so that the underside is completely covered. Any gaps / pockets are a prone area for decalcification.



7. Place the appliance into the mouth and clean up flash with a Q-tip™ . Light Cure as necessary

To remove a bonded acrylic appliance from multiple teeth, use an appliance removing pliers to cause a cohesive fracture. Pull down towards the occlusal, loosening one side, then the other.

** NOTE: Band-Lok® and Ultra Band-Lok® can be substituted for Excel® Paste. If Ultra Band-Lok® is used, cure for 10 seconds per tooth through the acrylic from occlusal.

BONDING TROUBLESHOOTING

TYPE I – BOND FAILURE:

Majority of adhesive on bracket

POSSIBLE CAUSES:

1. Improper prophyl.
 2. Rubbing acid etch on tooth.
 3. Too short (<15s.) or too long of etch (>90s.).
 4. Incomplete rinsing of etch.
 5. Insufficient drying of tooth; or drying with contaminated air.
 6. Saliva contamination after etch.
 7. Excessive sealant (primer) on tooth.
 8. Insufficient drying after scrubbing enamel with Self Etching Primer
 9. Moving bracket during adhesive gel period.
 10. Hard, acid resistant, fluorosed, hypocalcified or aprismatic enamel.
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BONDING TROUBLE SHOOTING

TYPE II – BOND FAILURE:

Majority of adhesive on enamel surface

CAUSES

METAL BRACKETS:

1. Paste not “battered” into mesh.

CERAMIC BRACKETS:

1. Improper silination of bracket base.
2. Base contaminated by handling.

BONDING TROUBLE SHOOTING

TYPE III – BOND FAILURE:

COHESIVE

CAUSES

1. Patient abuse
2. Improper light cure

Rebonding a Bracket

1. With a micro-etcher, sandblast all the composite off the bracket
2. Apply 1 coat of Assure® Bonding Resin to the bracket base and air dry.
3. Prophyl, etch, rinse and dry enamel as previously described.
4. Apply one coat of Assure® Universal Bonding Resin to the enamel and air dry.
5. A. Apply the paste to the bracket base and position on the tooth. Cure the adhesive with any curing light.
B. If Rely-a-Bond® is used, the Rely-a-Bond® Primer must be applied to the enamel and bracket base.



Key Points For Bonding Lingual Retainers

“The better the fit, the better the bond.”



1. Adapt the retainer to anatomy of each tooth;
2. Sandblast the retainer wire wherever it will be bonded.
3. Before etching, sandblast the lingual surfaces of each tooth to be bonded.

Bonding a Composite Aligner Attachment



1. Prophyl, rinse and dry the enamel.



2. Acid etch for 30 seconds with Phosphoric acid, rinse and dry.



3. Apply one coat of Assure® Universal Bonding Resin and lightly dry with air.



4. Apply FlowTain™ or LCR™ to the thermoplastic aligner matrix.



5. Place the aligner in the mouth and light cure for 20 seconds through the aligner.

Occlusal Buildup of Posterior Teeth



1. Prophyl, rinse and dry.



2. Acid etch for 30 seconds with Phosphoric acid, rinse and dry or Condition with a Self Etching Primer



3. Apply Ultra Band-Lok® or LCR™ adhesive to the conditioned, dried surface.



4. Light cure for 20 seconds.

Cementing Bands With: Band-Lok® Dual Cure Cement

- Step 1. Lightly roughen the inside of the band with a fine diamond bur or microetcher.
- Step 2. Prophyl, rinse, dry and isolate tooth to be banded.
- Step 3. On a mixing pad place equal parts of Band-Lok® Pastes A and B. A one inch strip of each part will provide enough cement for four bands. (A ¼ inch strip of each will cement one band.) If paste is not going to be mixed immediately, shield from light.
- Step 4. Mix Pastes A and B thoroughly for 10 seconds and place in band. Seat band and clean off excess flash (to prevent cement from sticking to metal instruments, wipe instrument in wax before touching cement).
- Step 5. **At this point you have three curing options:**
- A. With a dental curing light, cure the cement from occlusal for 10 seconds. Cement can be exposed to saliva at this point. Final cure will occur in five minutes.
 - B. With a dental curing light, cure the cement from the occlusal for 30 seconds. Cement is now completely cured and can be exposed to headgear forces immediately.
 - C. Allow the cement to chemically cure on its own; complete polymerization will occur in 10 minutes.

GENERAL INFORMATION: In high stress situations (banded expanders), etching the enamel prior to band placement will significantly increase the adhesion. Band-Lok® will adhere to a composite restoration or acrylic jacket that has first been roughened and conditioned with Assure® Bonding Resin. When bonding to a porcelain crown, condition first with Porc-Etch™ and Porcelain Conditioner. When bonding to amalgam, gold or a stainless steel crown, sandblast and condition with Assure® Bonding Resin before seating band. To extend the working time of Band-Lok® to seven minutes, mix on a paper covered frozen slab.

Cementing Bands With: **Ultra Band-Lok[®]** Light Cure Cement

- Step 1. Lightly roughen the inside of the band with a fine diamond bur or microetcher.
- Step 2. Prophy, rinse, dry and isolate tooth to be banded.
- Step 3. Place the *Ultra Band-Lok[®]* Paste in the band, seat band and clean off flash in the mouth in the following manner:
 - A. Wipe the occlusal surface with a damp cotton roll or,
 - B. Lightly cure from the occlusal for one second with a dental curing light (use caution not to exceed one second of light exposure). Peel away excess flash.
- Step 4. Position light tip in close proximity to the occlusal surface of the tooth and band interface. Moving in a slow circle around the top of the band, light cure for 30 seconds. At this point the cement is fully cured, allowing immediate archwire placement.

GENERAL INFORMATION: The curing light utilized should be capable of providing a minimum of 800 milliwatts of intensity to cure material properly. Check your curing light with a radiometer monthly.

Ultra Band-Lok[®] will adhere to a composite restoration that has been roughened and conditioned with Assure[®] Bonding Resin. To bond to a porcelain crown, condition surface first with Porc-Etch[™] and Porcelain Conditioner. When bonding to amalgam, gold or a stainless steel crown, sandblast the metal surface and condition with Assure[®] Bonding Resin before seating band. Bands preloaded with *Ultra Band-Lok[®]* cement should be shielded from ambient light. In high stress situations (banded expanders), etching the enamel prior to band placement will significantly increase adhesion to the tooth surface.



Cementing Bands With: **Precedent[®] Glass Ionomer Cement**

1. Prophy teeth to be bonded.
2. With a bur or microetcher, lightly score the inside of each band.
3. For each band, place two level scoops of powder and 4 drops of liquid on a mixing pad.
4. Mix all the powder and liquid together until a uniform, creamy consistency is obtained. Place in band and seat. Clean excess with a damp cotton roll. Wait 10 minutes to apply force. Cleanup should be done before cement completely hardens.
5. The working time of Precedent[®] at room temperature is 2½ minutes. To extend to 4½ minutes, place a sheet of the mixing pad on a frozen glass or aluminum slab. Place powder and liquid on the paper on the slab. Wait 2 minutes and mix thoroughly.

NOTE: Precedent[®] can be used to bond an attachment to a phosphoric acid etched intruded cuspid. In this case, wait 20 minutes before applying force.

Crown Lok™ Fluoride Releasing Luting Cement

INTENDED USES: Crown Lok™ can be used to cement metal crowns, orthodontic bands and Maryland bridges.

DIRECTIONS FOR USE

PROPHYLAXIS: Using a rotary instrument with a rubber cup or brush, prophylax the enamel surfaces to be bonded with 1st & Final® or plain pumice. Do not use prophylax paste which contains oil, which may leave a film. Special attention should be given to posterior teeth and lingual surfaces, where patient hygiene may not be satisfactory and tartar and calculus may be in excess. Rinse thoroughly and dry teeth with oil and moisture-free compressed air.

ETCH (OPTIONAL STEP): To further increase adhesion without making removal more difficult, etch a small area on the buccal and lingual surface of the tooth. Rinse and dry thoroughly.

PREPARING THE CROWN OR BAND: With a microetcher, sandblast the inside of the crown, band or bridge. If a sandblaster is not available, roughen with a medium diamond bur.

MIXING & CEMENTATION: Mix equal volumes of Crown Lok™ Paste A and Paste B for 15 seconds on the supplied mixing pad and place inside the appliance. When loading a crown, caution should be taken to only line the crown with cement. The working time from the start of mix is 2 minutes. Final set will occur 5 minutes from the start of mix. To extend the working time to 4 minutes, mix the pastes on a paper covered frozen slab.

De-bonding Brackets and Adhesive Removal

Physically remove the metal bracket by applying a “pinch” or “torque” to the bracket base and pop off the bracket. This can be done using a bracket removing plier, ligature cutter or Weingart plier.

A. Remove any residual bulk adhesive from the tooth surface with Renew® Finishing System Bur #118S, #118L, #218 or #815 in a high speed handpiece. To polish the tooth surface, use the Renew® Finishing System Point #383 (Friction Grip, Latch or Straight Handpiece) on a slow setting. Prophylax with 1st & Final® to further polish.

B. Reliance Restore™ Polishing Paste, in a slow speed prophylax cup, is used to put back the smooth shiny finish after debonding a bracket from a porcelain jacket, composite restoration or metal crown.

When removing ceramic or sapphire brackets, consult the bracket manufacturer for proper method and debonding tool. **IT IS IMPERATIVE** to remove any adhesive flash from around the bracket base with a finishing bur like the Renew® Finishing System Bur #118s before attempting removal. This allows the instrument to firmly grip the bracket base and prevent the plier from riding up the bracket base and shearing off the tie wings when pressure is applied.



*To effectively remove adhesive from the lingual surfaces, use the Renew® Finishing System #815 bur

O.V.S.™ Orthodontic Veneer System



1. Remove brace from tooth and choose the correct size FaciForm™. Trim the length and sides with contouring scissors.



2. Polish off remaining cement with bur. Select a tooth shade using a Vita® Shade Guide (or a self made A1, A2 and B1 Guide).



3. Etch facial and lingual surface for 30 seconds. Rinse and dry. Seal the enamel surface with Light Bond™ or Assure® Universal Bonding Resin.



4. Isolate the tooth and fill FaciForm™ with OVS™ composite in a thin, even layer. No form should show through. Use Light Bond™ sealant to thin paste, if desired.



5. Using a Stick-N-Place™ instrument, apply FaciForm™ with composite to the tooth surface and light cure for 30 seconds.



6. Using a scaler, peel off FaciForm™. Remove any flash with flame carbide bur. Apply Plastic Conditioner to facial surface and rebond bracket.

C&C™ Composite and Chain Extrusion System



1. Expose the target tooth.



2. Prophylax the enamel surface. Rinse and dry. Acid etch the enamel with 37% phosphoric acid for 30 seconds, Rinse and dry.



3. Apply one liberal coat of Assure. Stroke over 2 or 3 times. Lightly dry with compressed air.



4. With the Flowtainer syringe, fill the form to brim with paste covering the chain. **Do not overfill the form.**



5. Place the loaded form on the conditioned, exposed tooth surface.



6. Light cure through the form for 20 seconds.



7. Lift away form. Light cure composite pad for additional 20 seconds.



8. Surgically close the site, as necessary,



9. Attach the gold chain to the appropriate tooth or archwire.

INDIRECT BONDING Custom Base Technique

“The art of indirect bonding roots from thorough accurate procedures”

Notes:

-From the front and sides of the impression tray you will need at least 5mm of space from the labial surfaces of anterior teeth and buccal surfaces of posterior teeth.

-The last tooth (ex: 2nd molar) to be included in the IDB impression will need to be fully within the tray framework.

-Select a high quality alginate – (ex: Kromopan 100[®])

-Load the tray with alginate, loading the tray from one side to the other; this helps to eliminate air pockets in the impression.

-Pour a high quality stone – let the models dry completely for 10 to 12 hours. Trim models.



1. Once all bracket height lines and long axis lines are complete, paint the model with a 50/50 ratio of liquid foil and water. Apply the mixture to all surfaces of the model except the bottom of the base. Let model dry for 30 to 40 minutes.

2. Place the adhesive on the bracket base. Spread the adhesive on the base and press into the mesh. Place brackets on model and clean the flash.



3. a) If using ThermaCure[®] – place the models in a toaster oven set at 325°F for 15 minutes. Be sure to *use a separate thermometer to ensure temperature.*

Or



3. b) If using a light cure system, cure 10 seconds from the incisal edge and 10 seconds from the gingival – regardless of light intensity. If a light box is used, additional light curing of 10 seconds per bracket with a hand held light is suggested.



4. Use block out resin or FlowTain[®] to fill in any small bubbles on the teeth, or any small spaces between the teeth and any undercuts that would interfere with tray placement.

5. Block out the auxiliary attachments to brackets such as hooks used for elastics and steiner wings. Use white decorator icing made by Wilton[®] or MoreTite[®] plumbers putty.



6. Place model in a Biostar[®] vacuum machine. Insert and vacuum the first matrix – a soft tray made of - 1mm mouth guard Bio Plast[®] material. Remove model and trim.

7. Spray the first tray (mouth guard material) with Silicone Spray.



8. Place model back in Biostar[®]. Insert and vacuum form the second matrix – a hard tray made of .075 Splint Bio Ceryl[®].

9. Remove model and trim excess material.



10. Place your model with the brackets and soft tray still on the model (the hard tray does not go in the water) in warm water (not hot) for 15-20 minutes. This will reactivate the liquid foil and after 15-20 minutes the soft tray can be removed from the model. Remove the soft tray from the model and re-insert into hard tray.



11. With a toothbrush, lightly brush the custom pads with acetone or isopropyl alcohol to remove any residual separating medium. Rinse and dry.



12. Lightly micro-etch each custom pad (do not distort the fit – 1 or 2 seconds of light sandblasting). Rinse and dry.



13. Etch, Rinse, & Dry enamel.

14. Place 1 coat of Assure® Bonding Resin to all enamel surfaces & air dry.



15. Place 1 coat of Assure® Bonding Resin to each custom pad & air dry



16. If using light cure:

a) Place FlowTain® on the gingival half of the bracket – when the trays are placed in the mouth, the adhesive will smear towards the incisal edge – greatly reducing flash.

-or-

b) Place a thin layer of FlowTain® on the entire custom pad



17. Seat the trays – Light cure 10 seconds through the hard tray. Remove hard tray – Light cure 10 seconds through the soft tray. Remove soft tray.

18. If using a chemical cure sealant:

a) Mix equal parts of Maximum Cure® sealant part A/B. Apply a thin layer to the custom pads and the enamel.

-or-

b) Place Custom IQ® part A on the bracket. Place Custom IQ® part B on the enamel.



19. Seat tray. Hold in the mouth without applying force for 90 seconds. Let the patient rest on cotton rolls for an additional 5 minutes without applying any mastication forces. Remove hard tray. Remove soft tray.

Bond Aligner® **Clear Aligner Adhesive** For bonding appliances to Thermoplastic Aligners



1. Dispense Bond Aligner® Adhesive to the back of the appliance to be bonded.



2. Apply appliance to the thermoplastic aligner surface.



3. Light Cure for 10-20 seconds through the thermoplastic aligner.

Perfect A Smile® Pontic Paint

1. Mix the paint in the jar thoroughly prior to application.



2. Apply three coats of the Perfect A Smile Pontic Paint to the thermoplastic aligner surface, adequately brushing over several times after each coat.



3. Light cure each coat for 10 seconds through the thermoplastic aligner. Light cure the final coat for 20 seconds.



4. Thermoplastic Aligner surface is now ready for immediate placement.

Note: A Reliance Shade Guide is provided. However, different aligner materials will result in slight variation to shade appearance. For specific results to match your aligner material, fabricate a shade guide by painting 3 coats of each shade onto the aligner plastic and light cure. Colors can be blended.

To create a clear, thermoformed matrix in the lab for use with Perfect A Smile:

1. Follow standard office procedure for taking/pouring an impression.
2. Replace the missing tooth or teeth with any denture tooth shaped to properly fill the edentulous space or use composite to build a tooth shape. We recommend Light Bond Operative Paste to hold the denture tooth in place.
3. Fractured or worn teeth can be repaired or altered in shape with Light Bond Operative, stone or comparable material.
4. When painting a single pontic, make the pontic tooth on the model slightly shorter (~0.5mm) than the adjacent tooth. This will account for the thickness of the thermoformed material on the adjacent tooth. The painted tooth will not appear to have a material void over the incisal edge.
5. Create the thermoformed matrix (clear, suck down material) using the clear thermoforming material of your choice

Note: This procedure is not necessary when painting pontics into Invisalign aligners or a lab aligner where the tooth is lost during treatment.