



Reliance Orthodontic Products, Inc.

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04/09

INDIRECT BONDING TECHNIQUE - CLEAN BASE

Indirect bonding is designed to give the clinician a high degree of accuracy when placing brackets. The brackets can be placed by hand or by using the Slot Machine from Creekmore Enterprises. The indirect procedure is technique sensitive but by following the instructions, paying strict attention to moisture control, using the proper materials and avoiding contamination of the bracket bases, the results will equal a direct bond in strength and with proficiency, will save chairside time.

- A.) Take an accurate stone impression of the arch to be bonded. If accuracy is in doubt, RE-TAKE!
- B.) Lay each metal bracket against it's specific tooth and burnish base to precisely fit the anatomy of that tooth.
- C.) When model is dry, coat the surface (labial or lingual) to be bonded with a 50-50 mix of liquid foil separator and water. (Great Lakes Orthodontics makes a fine separator). Allow to dry for a minimum of 4-6 hours. Overnight is ideal.
- D.) Select a water soluble material to use to place brackets on the model. Carmel candy or wallpaper paste have the proper viscosity and allow for bracket re-adjustment by heating. Candies should be used at or slightly above room temp. Take a small amount and place on the back of the bracket and then place on the model. Press firmly in place and clean excess flash around the bracket base. Caution should be taken not to leave a large gap between the bracket base and the stone model. Other materials have been developed that are specially designed to adhere the brackets to the model and can also be used. Whatever you decided to use, it must be able to be cleaned off the bracket base easily after the transfer tray has been removed from the model. You cannot use any material that will permanently adhere or clog the mesh in the bracket base.
- E.) When the material is cool and firmed up, you can process the transfer tray material of your choice over the model. The tray itself will only cover the lingual, incisal and labial portion of the cast. There are two popular transfer tray materials that you can use.....(NEXT PAGE)



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1. A silicone tray that uses a soft, light body silicone impression material (wash) around the bracket tie wings with a second, firmer heavy body (putty) silicone material to make up the outer tray.
 2. A 1mm Bioplast material sucked down on the cast first (soft tray), then a clear 1mm Splint Biocryl is sucked down over the Bioplast. This provides a clear transfer tray with extra firmness of the Biocryl outer layer as a shell.
- * There is no advantage of one tray over the other, but remember; a clear tray must be used if light cured materials are the choice to transfer the brackets into the mouth.*
- F.) Once material has set, place model and tray in a bowl of warm water for approximately 30 minutes. Gently remove the tray from the model. If you used the Biostar (suck down) method, there may be material in the under cut areas of the model that should be trimmed away first using a sharp knife or scissors. This will make the tray removal much easier. Place the tray in a beaker in an ultrasonic cleaner to dissolve the material off the backs of the brackets. After removing from the ultrasonic cleaner, use a toothbrush and acetone and scrub any remaining cement off the back of the brackets. This will leave you with a clean bracket base. Gently blow dry the tray to remove all water. No water can remain behind the brackets in the transfer tray material. Swab the backs with acetone or pure alcohol to remove any oils or contaminants and let air dry.
 - G.) Section tray into quadrants. Prep patient as normal-prophy, etch enamel for 30 seconds, rinse and dry. This should be done ONE QUADRANT AT A TIME. Do not trial fit the tray in the mouth before applying adhesive!! This will contaminate the base and result in bond failure. If a plastic bracket is used, coat each bracket base with **Reliance Plastic Appliance Conditioner** and let dry for approximately 1-2 minutes. Next, mix **Reliance A&B Bonding Resin** and paint a thin coat on the labial surface of the tooth to be bonded. **Assure[®] Universal Bonding Resin** can be substituted for **Reliance A&B Bonding Resin**. Mix **Excel[®] A&B** paste and place the mixture on the gingival half of each bracket. This will allow the paste to flow across the bracket base and control flash when the tray is placed in the mouth.



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Immediately place the tray in the mouth and seat firmly. Now, hold tray in place by putting gentle pressure applied to the labial surface; thumbs on the occlusal, all other fingers gently on the labial portion of the tray.

Do not change assistants at this point!!

The person who seats the tray should also hold it in place. Disturbing the tray at this point can cause bond failures. Another cause for failure at this stage is too much pressure. Seat the tray firmly, hold in place gently! Hold for 2-3 minutes then release. Allow the tray to remain in place for 4 minutes passively. The tray can now be removed by sectioning interproximally and peeling the material off the bracket, gingival to incisal.

Excel[®] is used as the adhesive for three reasons:

1. The paste is a smooth, creamy consistency that will flow easily onto the bracket bases and fill minor voids.
2. **Excel**[®] provides you with a full three minutes of working time from start of mix.
3. **Excel**[®] releases fluoride with no loss of bond strength.

If **Light Bond**[™] or **FlowTain**[™] light cure material is to be used, follow the above instructions, A-G. Instead of **Reliance A&B Bonding Resin**, use the **Light Bond**[™] or **Assure**[®] **Universal Bonding Resin** on the labial surface of each tooth. Apply **Light Bond**[™] or **FlowTain**[™] paste to the bracket bases making sure that the paste is worked into the mesh, then seat the tray. Cure each bracket from the incisal edge for 10 seconds through the hard tray, then remove the hard tray and cure 10 seconds through the soft tray; 5 seconds from the incisal and 5 seconds from the gingival touching the base through the soft tray. This longer cure time is required because the light has to penetrate the clear tray material before reaching the bracket base. A light cured material will give you more working time with comparable strength. Remember, a clear transfer tray must be used when using **Light Bond**[™] or **FlowTain**[™].

BONDING WITH CERAMIC BRACKETS:

Ceramic brackets that have a chemical treatment (silane) on the base, cannot be bonded to a stone model with a water soluble cement. When a chemically treated ceramic bracket is indirect bonded, a custom base indirect technique MUST be used.



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MATERIALS NEEDED:

- ◆ **Excel[®]** regular set bonding adhesive.
- ◆ **Reliance Plastic Appliance Conditioner.**
- ◆ Transfer tray-Silicone impression material (soft, light body and a heavy body material) or 1½mm Bioplast soft tray material and 1mm Splint Biocryl for hard outer tray).
- ◆ Acetone or pure (not isopropyl) alcohol.

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