TECHNICAL DATA SHEET

INDIRECT BONDING

Frequently Asked Questions

1. Does APC™ PLUS Adhesive have comparable bond strength to APC™ II Adhesive when using the indirect method?

A. Yes. APC PLUS adhesive and APC II adhesive provide similar bond strength when used with the Sondhi™ Rapid-Set Indirect Bonding Adhesive System.

2. Are there any special requirements needed to prepare the stone model for use with APC PLUS adhesive?

A. Following the Sondhi Indirect Bonding Technique*, after pouring the ortho stone into the impression, **the model should be dried.** This can be accomplished by drying overnight in an oven at 110° F (43° C), or under ambient conditions. Because of the hydrophilic nature of APC PLUS adhesive, using a damp model may negatively affect the curing of the custom resin base.

3. How important is the secondary curing of the brackets after removing the tray from the stone model?

A. The primary curing of the adhesive, especially when metal brackets are used, on a stone model is never complete because of the opacity of the model. Therefore, it is strongly recommended that a 2-minute secondary cure of the custom resin base be performed by directly exposing the tray to the light source.*

4. After removing the tray from the stone model, rinsing, and drying, the APC PLUS adhesive resin appears cloudy white (Figure 1). What does this mean?

A. The white color is caused by water interacting with a surface layer of hydrophilic APC PLUS adhesive resin. This very thin, white layer can be microetched or cleaned prior to bonding and should not present a problem.

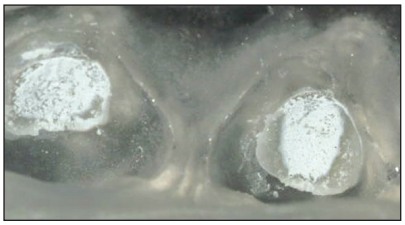

Figure 1: White layer on resin base.

*See article published by Dr. Sondhi, "Bonding in the New Millennium: Reliable and Consistent Bracket Placement with Indirect Bonding", *World Journal of Orthodontics,* Vol. 2, No. 2, 2001, pp 106-114.

5. I use Clarity™ Ceramic Brackets with APC PLUS adhesive for indirect bonding and do not observe a white layer over the custom resin base. Why?

A. This white layer is less noticeable with ceramic brackets than with metal brackets because a more thorough cure is obtained during the primary cure with ceramic brackets.

6. How should the tray be prepared for bonding?

A. Following the current technique, the custom resin base should be cleaned using a microetcher (50 micron alumina particles) by gently passing the nozzle over the custom resin bases and then rinsing with de-ionized water to remove residue (Figure 2). As with APC II adhesive, take care not to damage the custom resin base. Microetching may not completely eliminate the white layer, but will create a roughened surface for bonding.

Figure 2: Tray after microetching.

7. Will microetching the white layer affect the custom resin base?

A. No. The white surface comes from a thin layer covering the custom resin base. Lightly microetching will not damage the adhesive base and will ensure a roughened base for bonding.

8. I do not own or use a microetcher. How can I clean the custom resin base prior to bonding?

A. If a microetcher is unavailable, thoroughly scrubbing the custom resin base with a toothbrush is also an effective cleaning method. Although the cloudy white layer may remain, adequate bond strength will be achieved.

9. What will happen if I bond using APC PLUS adhesive without microetching or cleaning the custom resin base?

A. As with APC II adhesive, omitting the cleaning step may result in a reduction in bond strength.

10. Does APC PLUS Adhesive used for indirect bonding with the Sondhi Rapid-Set System have comparable bond strength to APC PLUS Adhesive used for direct bonding?

A: Yes. APC PLUS Adhesive used with the Sondhi Rapid-Set System provides similar bond strength to direct bonding.

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REF 012-153 0409