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Click on the upper right-hand corner with your cursor.

Click the left and right arrow keys in the tool bar at the bottom of the page.

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24+ NEW PRODUCTS ALL-BOND UNIVERSAL This truly universal adhesive has ea

SPECIAL Issue

Dental PRODUCT SHOPPER®

2015

Your Source for Product Evaluations and Information

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P 3

BUY IT NOW

LIGHT-CURED DENTAL ADHESIVE

BISCO, INC

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USE OF THERACAL LC LINER FOR CROWN PREPARATION

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ALL-BOND UNIVERSAL

SUPERIOR BOND STRENGTH IN AN ADHESIVE THAT IS TRULY UNIVERSAL

P.11

ALL-BOND UNIVERSAL

This truly universal adhesive has ease of use and bond strength on its side.

Ease of use and simplified technique are 2 characteristics often requested by dental professionals when asked what they would like to see manufacturers incorporate into new products. In an effort to answer this request, BISCO recently introduced ALL-BOND UNIVERSAL. This universal dental adhesive combines self-etch and total-etch bonding, and it includes the resin layer and activator in 1 bottle.

PERFECT BALANCE

BISCO describes ALL-BOND UNIVERSAL as having the ideal chemical balance, including MDP monomers to ensure versatility. These mildly acidic monomers are excellent for self-etching enamel and dentin, and they permeate easily through total-etched surfaces, forming thick hybrid layers with deep resin tags. This mild acidity (pH > 3) also guarantees the universal compatibility of ALL-BOND UNIVERSAL with dual-cured and self-cured composite cores and resin cements.

ALL-BOND UNIVERSAL's hydrophobic formula reduces the ability of water to move from the tooth to the adhering composite after light curing, improving the bond's durability.

TRULY UNIVERSAL

ALL-BOND UNIVERSAL is compatible with all light-cured, self-cured, and dual-cured resins, making it ideal for all direct and indirect restorations. It also can be used for desensitizing during scaling procedures, for intraoral repairs, or as a protective varnish for glass-ionomer-based fillings.

STRENGTH IN A BOTTLE

The unique formulation of ALL-BOND UNIVERSAL

DIRECT PLACEMENT

Figure 1—Self-etching technique: Prepare cavity. Wash thoroughly with water spray. Remove excess water (do not desiccate).

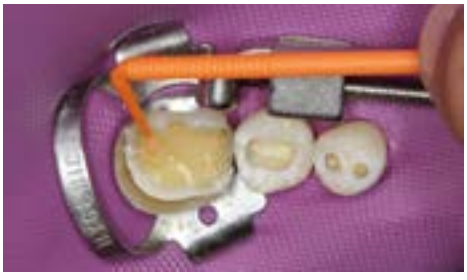

Figure 2—Apply ALL-BOND UNIVERSAL according to instructions.

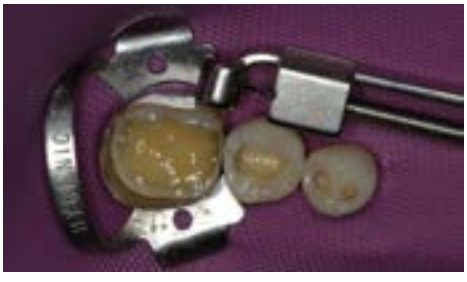

Figure 3—Evaporate excess solvent by air-drying thoroughly. The surface should have a uniform glossy appearance.

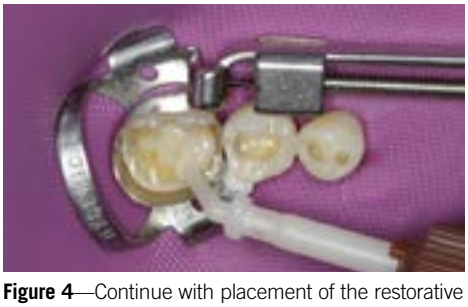

Figure 4—Continue with placement of the restorative material.

INDIRECT PLACEMENT

Figure 1—Maxillary right posterior teeth prepared for full-contoured zirconia restorations. Two coats of ALL-BOND UNIVERSAL applied and light-cured.

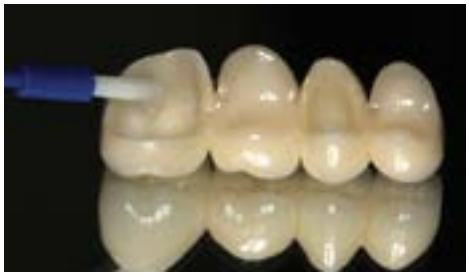

Figure 2—Application of ALL-BOND UNIVERSAL (or Z-PRIME PLUS) to inside surface of crowns.

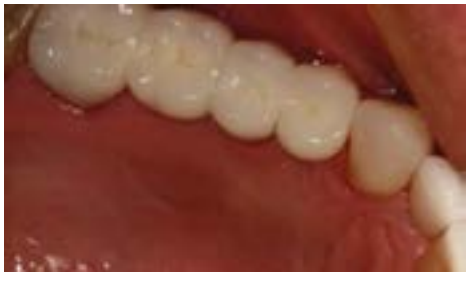

Figure 3—Restoration completed after cementation with DUO-LINK.
NOTE: Due to the low film thickness, ALL-BOND UNIVERSAL is easily spread thin and will not affect cementation procedures, even with tight fitting restorations.

creates high bond strengths to all indirect substrates, including metal, glass ceramics, zirconia, alumina, porcelain (silica-based), and lithium disilicate. For example, the shear bond strength (MPa) when light-cured is 48.8 MPa to composite, 33.7 MPa to alumina, and 26.9 MPa to enamel.

EASE OF USE

According to BISCO, ALL-BOND UNIVERSAL flows easily into etched surfaces, offering both chemical and mechanical sealing after light curing. Clinical evaluation confirms that the ease of use of ALL-BOND UNIVERSAL leads to virtually no post-operative sensitivity.

For more than 30 years BISCO has taken pride in listening to dental professionals' needs. With ALL-BOND UNIVERSAL, it has created a product with a simple technique backed by excellent material science.

BISCO, Inc
1100 W. Irving Park Rd.
Schaumburg, IL 60193
800.247.3368

PEER-TO-PEER
PRODUCT
EVALUATION

RATING
4.4

ALL-BOND UNIVERSAL Light-Cured Dental Adhesive

BISCO, Inc

The 1-bottle system of ALL-BOND UNIVERSAL makes it one of the most versatile bonding agents on the market.

BISCO describes ALL-BOND UNIVERSAL as the "adhesive frontrunner with the latest technology to incorporate etching, priming, and bonding in a 1-bottle system."

Thirteen *Dental Product Shopper* evaluators, with 9 to 35 years of experience, participated in this evaluation of ALL-BOND UNIVERSAL. They rated and commented on several product features, including performance in various modes, ease of use, versatility, and postoperative sensitivity. They also were asked to rate their overall satisfaction with the material.

"An excellent all-purpose adhesive."
William R. Kisker, DMD
Vernon Hills, IL

"This is as simple as it gets."
John W. Horn, DMD
Hegins, PA

Ease of Use

The ALL-BOND UNIVERSAL system takes advantage of 1-bottle adhesive technology. According to BISCO, the ability to combine primer and adhesive in a single bottle makes bonding quicker and easier.

When asked to rate the ease of use of ALL-BOND UNIVERSAL, 6 evaluators rated it as excellent, 4 rated it as very good, 2 rated it as good, and 1 rated it as poor. Eleven dentists named ease of use as their favorite feature of ALL-BOND UNIVERSAL.

A dentist from Franklin, TN said, "I liked the 1-bottle approach. It makes inventory easy and predictable." An evaluator from Hegins, PA, said, "This is as simple as it gets." This same evaluator said he would definitely purchase it in the future and recommend it to colleagues.

Versatility

According to BISCO, ALL-BOND UNIVERSAL can be used in many different ways. It can be used

OTHER PRODUCTS FROM THIS MANUFACTURER

RATING 4.4

Dental Product Shopper BEST PRODUCT 2012

SELECT HV ETCH
www.bisco.com

THERACAL LC
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in total-etch mode, self-etch mode, and selective-etch mode. It can be used for direct and indirect restorations as well.

When asked to rate the versatility of ALL-BOND UNIVERSAL, 7 evaluators rated it as excellent, 4 rated it as very good, and 2 rated it as good.

A dentist with 29 years of experience said, "Using ALL-BOND, with its versatility, will definitely allow me to cut down on supplies and the amount of bottles around."

Another evaluator with 9 years of experience said, "It is an excellent all-purpose adhesive with the outstanding performance of more complex single-use adhesives and multi-bottle systems." This same evaluator said he found ALL-BOND UNIVERSAL to be much better than similar products and that he would definitely recommend it to his colleagues.

Postoperative Sensitivity

When asked to rate ALL-BOND UNIVERSAL on reduced postoperative sensitivity, 3 rated it as excellent, 7 rated it as very good, and 3 rated it as good.

An evaluator with 20 years of experience said, "I have had no reports of postop sensitivity." This evaluator gave ALL-BOND UNIVERSAL an overall satisfaction rating of excellent.

85% would definitely recommend to colleagues.

Overall Satisfaction

When asked if they would recommend ALL-BOND UNIVERSAL to colleagues, 8 evaluators said definitely and 3 said probably. Seven dentists said they would definitely purchase ALL-BOND UNIVERSAL in the future and 4 said they probably would.

At the conclusion of the evaluation, the 13 participating dentists were asked to rate their overall satisfaction with ALL-BOND UNIVERSAL. Nine evaluators rated it as excellent, 2 rated it as very good, and 2 rated it as fair. An evaluator from Carteret, NJ, who gave ALL-BOND UNIVERSAL an overall satisfaction rating of excellent, summed up his evaluation by saying, "Overall, [it's] easy to use and, to this point, no sensitivity or debonds."

93% rated simplicity of 1-bottle system as excellent or very good.

ALL-BOND UNIVERSAL

BISCO, Inc
1100 W. Irving Park Rd.
Schaumburg, IL 60193
800.247.3368

How to Buy
Directly from the manufacturer.

RATING **4.4**

Dental PRODUCT SHOPPER BEST PRODUCT 2012

Evaluation Snapshot

Number of evaluators: 13
Combined years in practice: 327

Criteria	Average Score (out of 5)
Section A	
Product performance in total-etch mode	4.5
Product performance in self-etch mode	4.1
Product performance in selective-etch mode	4.5
Product performance with direct restorations	4.5
Product performance with indirect restorations	4.5
Application ease of use—number of coats from a single brush	4.1
Wet-ability (effectiveness of material to wet or flow onto the surface)	4.5
Ease of evaporation	4.1
Reduced postoperative sensitivity as reported by patient	4.0
Versatility of product (ability to be used with various techniques and substrates)	4.4
Simplicity of 1-bottle system (1 bottle that contains both primer and adhesive)	4.8
Cost ($130.00/kit)	3.4
SECTION A AVERAGE	4.3
Section B	
Overall satisfaction	4.4

0 | 1 | 2 | 3 | 4 | 5

Average of Sections A and B = **4.4**

Use of TheraCal LC Liner for Crown Preparation

Sam Simos, DDS

Sam Simos, DDS, is nationally recognized as a leader in cosmetic and restorative dentistry. He received his Doctorate of Dental Surgery at Chicago's Loyola University. Dr. Simos teaches postgraduate courses to practicing dentists on cosmetic dentistry, occlusion, and comprehensive restorative dentistry through Allstar Smiles' state-of-the-art Learning Center and client facility in Bolingbrook, IL, and throughout the country. He is committed to promote awareness, communication, and education within the dental profession through lecturing around the country and being the author of internationally published professional articles on the use of innovative techniques and materials.

CASE PRESENTATION | 5

A 35-year-old female patient presented with hot/cold sensitivity and pain associated with chewing on tooth No. 30. The patient's complaint was that the pain was worse in the morning, was present all day, and lasted for 10 to 15 minutes after stimulation. The pain was present for about 2 months and had stayed about the same. She avoided chewing on this side.

The patient's radiographs revealed some decay beneath the restoration. The restoration was also very close to the mesial pulp horn. A very strong possible diagnosis was cracked tooth syndrome. I also suggested to the patient that irreversible pulpal damage was possibly present.

After reviewing the digital photographs and digital radiographs, the patient and I discussed cracked tooth syndrome. For treatment options, we discussed the option of a crown and buildup. We also discussed that the patient might need a root canal.

The patient chose the crown and restoration because she wanted to resolve the chewing issue she was experiencing. She understood that a root canal would be necessary if complete resolution was not achieved in the temporary phase.

I removed the patient's existing filling and completed a crown preparation on tooth No. 30. The challenge I encountered during treatment was an issue with the patient's lingual cusps. Both lingual cusps fractured off during removal of the existing filling, confirming cracked tooth syndrome, which made the preparation more difficult. Prior to this issue, I took a digital photograph to show her that both lingual cusps showed evidence of a fracture line.

After the crown preparation procedure, I checked the patient's bite and dismissed her with postoperative instructions. Her 24-hour postoperative exam revealed no sensitivity to hot or cold and no chewing sensitivity. Her 2-week evaluation revealed normal chewing activity with no sensitivity. The final IPS e.max restoration was bonded in place, I checked her bite, and I dismissed the patient. After 6 months, the patient did not report any further problems with this tooth.

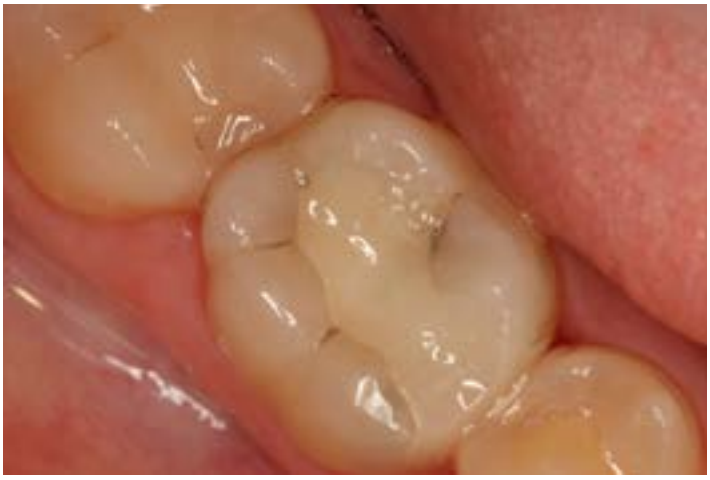

Figure 1—A 35-year-old female patient presented with hot/cold sensitivity and pain associated with chewing on tooth No. 30. The patient avoided chewing on this side because of the pain.

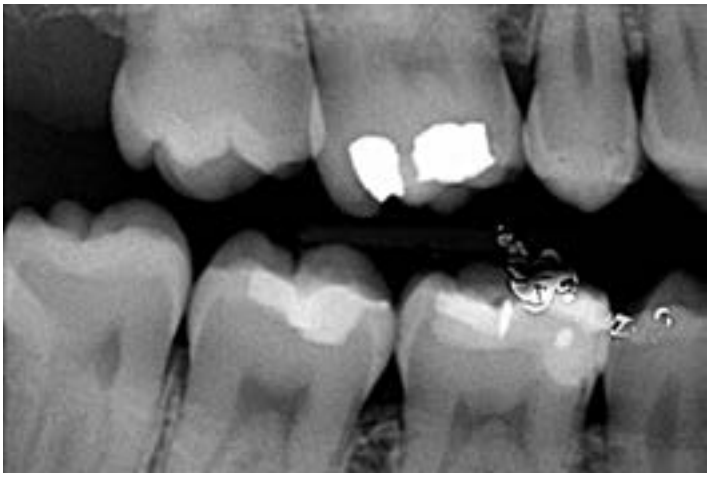

Figure 2—A radiograph revealed some decay beneath the restoration. The restoration was also very close to the mesial pulp horn. The patient and I discussed the diagnosis of cracked tooth syndrome.

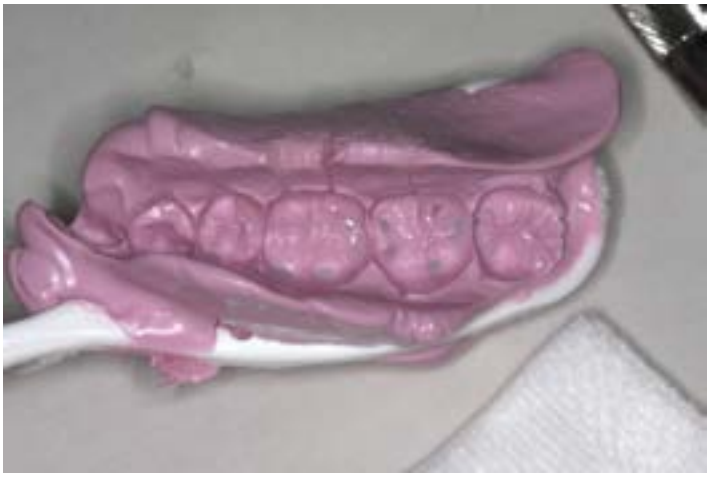

Figure 3—Prior to the tooth preparation, I took an impression of tooth No. 30 using Silginat impression material (Kettenbach).

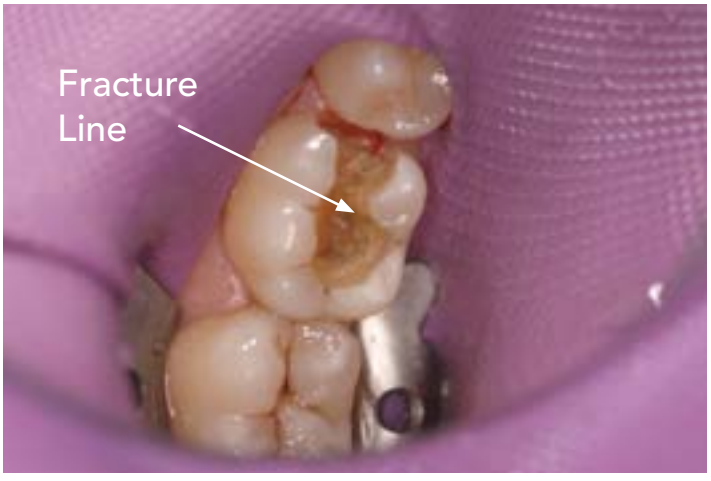

Figure 4—I removed the existing filling on tooth No. 30. While I was preparing the tooth under a nonlatex rubber dam (Hygenic Corporation), both lingual cusps fell off.

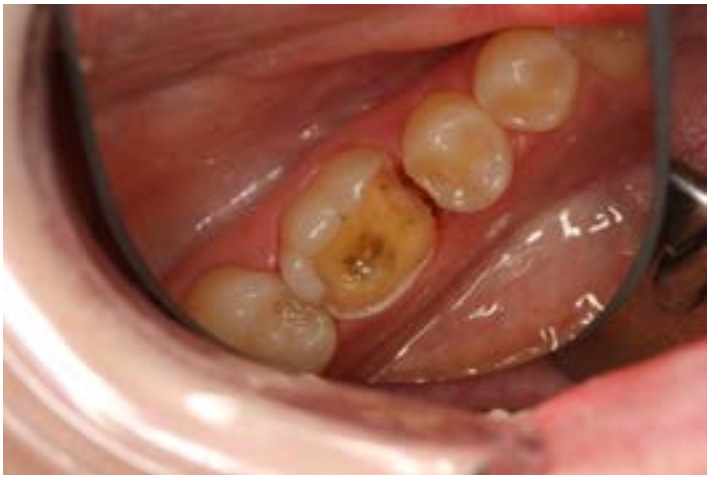

Figure 5—The restoration was then removed and evaluated.

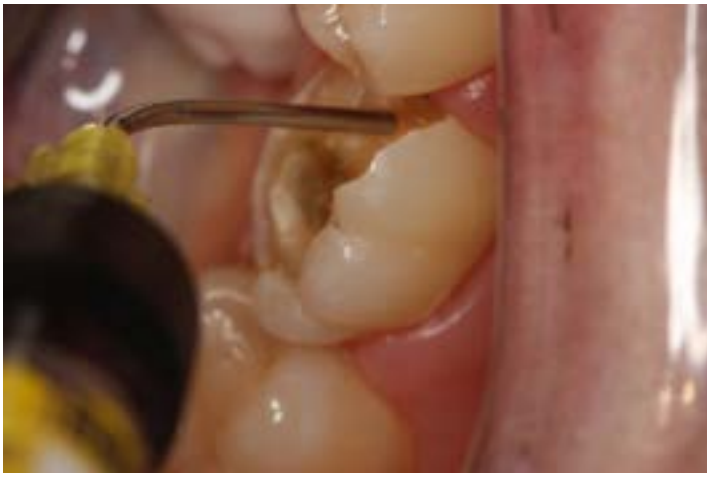

Figure 6 & 7— ALL-BOND UNIVERSAL (BISCO) bonding agent was used prior to placing TheraCal LC (BISCO) in the thin mesial occlusal area of the tooth; however, TheraCal LC can be placed with no adhesive and directly on a pinpoint pulpal exposure. Because of the proximity of the restoration to the mesial pulp chamber, I made a clinical decision to use TheraCal LC.

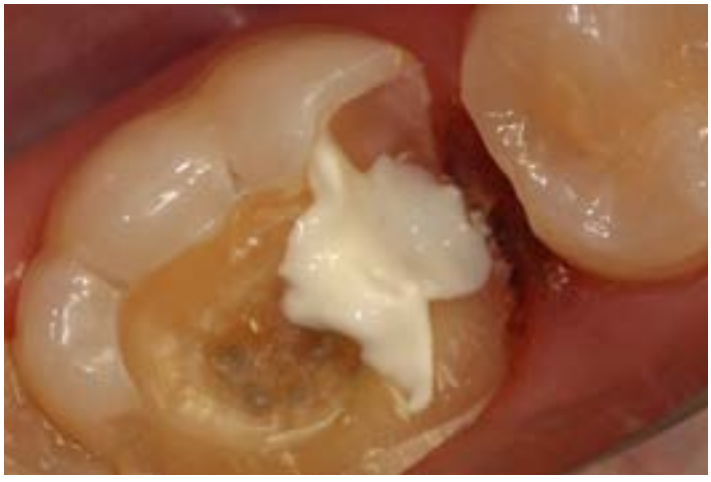

Figure 7—I used TheraCal LC in this case because it is a light-cured, calcium silicate liner that helps regenerates dentin and alleviates sensitivity.

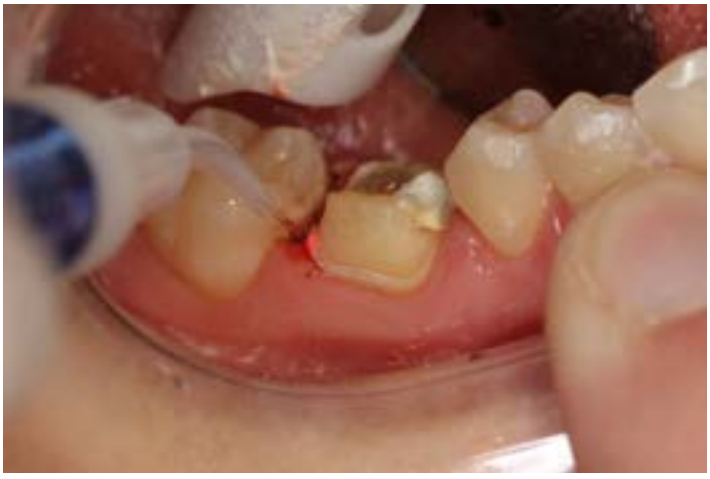

Figure 8—Crown preparation was completed on tooth No. 30. I used the Picasso laser (AMD Lasers) on the tissue circumferentially around tooth No. 30.

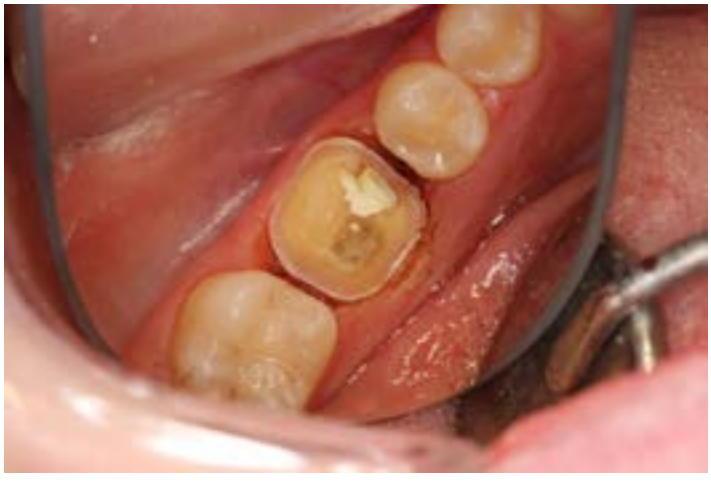

Figure 9—This photograph shows the final preparation of tooth No. 30.

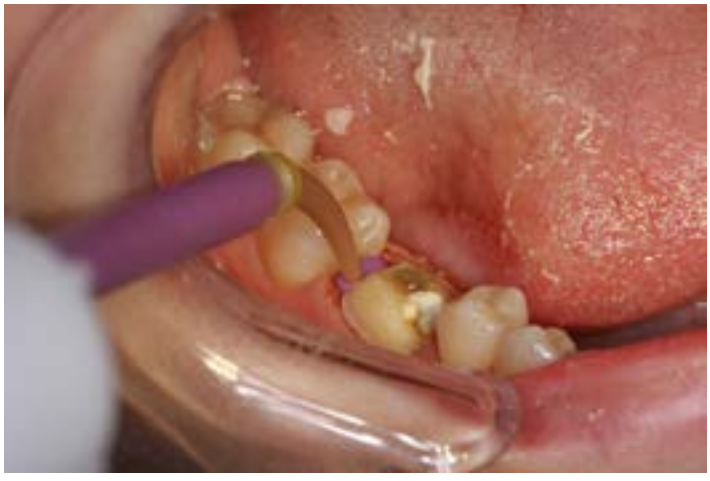

Figure 10—A dual-arch triple-tray impression was taken using T-Loc Triple Tray (Premier), along with Panasil initial contact x-light fast set wash (Kettenbach) and Panasil tray fast heavy (Kettenbach).

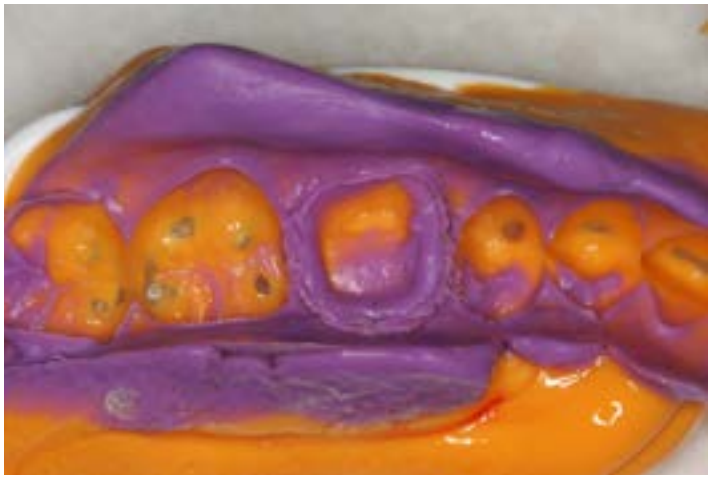

Figure 11—An impression was taken with Silginat (Kettenbach) before temporization.

Figure 12—A temporary was then fabricated using the preoperative impression and Integrity Multi-Cure temporary crown and bridge material (DENTSPLY Caulk).

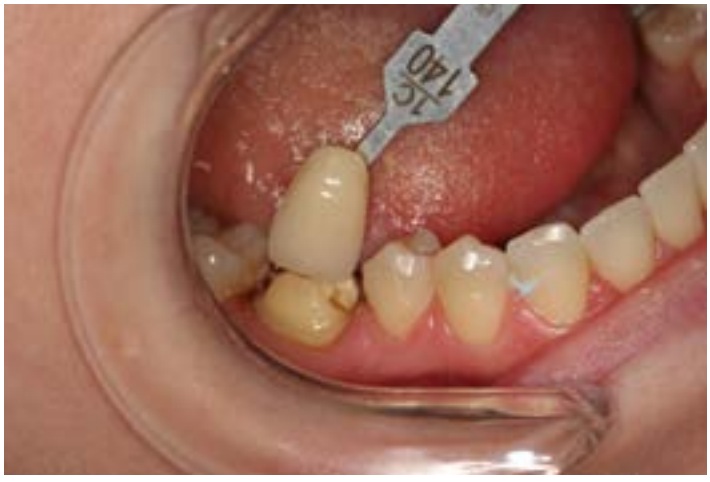

Figure 13—I used Chromascop Shade Guide (Ivoclar Vivadent) as a shade guide and photographed for laboratory use.

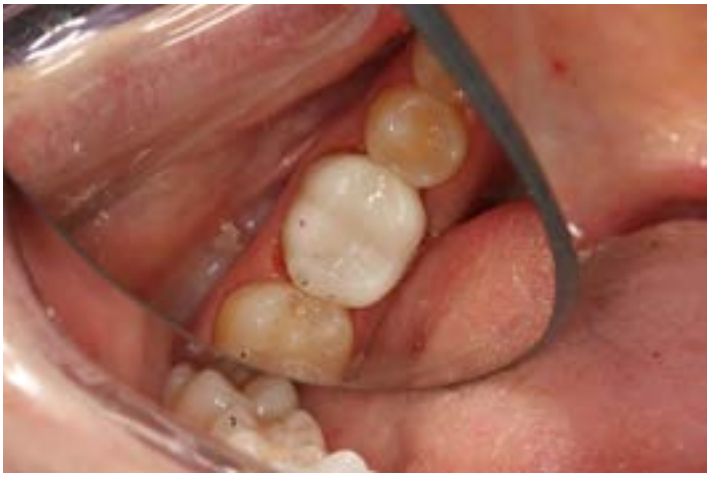

Figure 14—Once shaped and smoothed, I placed the temporary using Premise flowable composite (Kerr). I checked the bite and dismissed the patient with postoperative instructions. The final e.max restoration was bonded in place after several weeks. After 6 months, the patient did not report any further problems with tooth No. 30.

ABOUT THE LAB

Sunrise Dental Lab

The laboratory I use is Sunrise Dental Lab in Yucaipa, CA. Sunrise Dental Lab provides high-quality, personalized service with consistent results. I work directly with John Wilson, the owner of the laboratory.

SUNRISE DENTAL LAB
909.790.1115
www.sunrisedentallaboratory.com

GO-TO PRODUCTS USED IN THIS CASE

ALL-BOND UNIVERSAL

The ALL-BOND UNIVERSAL system takes advantage of 1-bottle adhesive technology. According to BISCO, the ability to combine primer and adhesive in a single bottle makes bonding quicker and easier.

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THERACAL LC

TheraCal LC is the only light-cured, resin-modified calcium-silicate- filled liner from BISCO designed for use in direct and indirect pulp capping, as well as a protective liner under composites, amalgams, cements, and other base materials.

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FROM THE PODIUM

JACK D. GRIFFIN JR, DMD

Since 1988, Dr. Jack D Griffin has practiced at Eureka Smile Center, a comprehensive general practice in suburban St. Louis. He graduated from Southern Illinois University Dental School and completed a general dentistry residency at the University of Louisville with an emphasis in advanced dental care in restorative dentistry, emergency care, implants, oral surgery, and special patient care. A frequent lecturer and author, Dr. Griffin is a diplomate of the American Board of Aesthetic Dentistry, accredited with the American Academy of Cosmetic Dentistry, and has earned a Mastership in the Academy of General Dentistry (AGD).

find out why DR. JACK GRIFFIN BELIEVES THAT ALL-BOND UNIVERSAL:

- Is compatible with no-etch, total-etch, and selective-etch procedures.
- Is the go-to bonding system in his practice.

ALL-BOND UNIVERSAL

SUPERIOR BOND STRENGTH IN AN ADHESIVE THAT IS TRULY UNIVERSAL

With any dentin bonding agent, clinicians are looking for high long-term bond strengths, patient comfort, and ease of use. Since 2012, "universal" bonding agents have been gaining popularity. BISCO's ALL-BOND UNIVERSAL has been our favorite in this category because of its low film thickness, clear color, versatility, simplicity, and superior bond strengths, whether direct or indirect. Additionally, the HEMA and water content are minimized, resulting in a decrease in water sorption and permeability, leading to longer lasting, more durable bonds.

Universal Defined

Regardless of the etch technique used (no-etch, total-etch, or selective-etch), ALL-BOND UNIVERSAL excels. Likewise, its clinical performance with both direct and indirect restorations decreases the need for any other bonding system in the office, reducing inventory while increasing efficiency. It is a truly comprehensive bonding system in a single bottle.

Etching Options

Many dentists are apprehensive about total etching of the dentin because of potential pulpal irritation from unsealed dentinal tubules or the physical pain-causing irritation from phosphoric acid itself. Therefore a "non-etch" approach to dentin bonding is often used.

For direct composite restorations, the "selective-etch" technique combines the best bonding to both tooth layers. Highest long-term bond strengths to enamel are gained after phosphoric acid etching, yet high long-term dentin bonding with lower sensitivity is achieved from a non-etch technique. ALL-BOND UNIVERSAL is ideal to use with this technique.

Simple Technique Versatility

Selective etching involves a 10 to 15 second etch of the enamel, thorough rinsing, moist dentin, and bonding agent application. Universal bonding systems ensure high bond strengths to enamel and dentin whether the smear layer was left intact without etching or if the smear layer was removed by intentional or unintentional phosphoric acid application. These materials show outstanding bond strengths regardless of bonding method.

I have found Class 5 root surface abfraction composites to be predictable using ALL-BOND UNIVERSAL with this technique. I bevel the enamel lightly with a finishing diamond, lightly sandblast the dentin with aluminum oxide, and etch the enamel with 37% phosphoric acid for 10 seconds. After rinsing, the root surface dentin is left moist. I place several layers of ALL-BOND UNIVERSAL on the surface, air dry, and light cure for 10 seconds. I then cover the root surface with a flowable composite, cure, and finish.

Because of its low film thickness and high bond strengths to non-etched dentin, ALL-BOND UNIVERSAL is great for cementing indirects such as lithium disilicate or zirconia. After isolation and dentin cleaning, I agitate several coats of ALL-BOND UNIVERSAL onto the dentin, air dry until no movement occurs, and light cure for 10 to 15 seconds. The restoration is then placed with the dual-cure resin cement. The film thickness under 10 µm allows complete seating of these restorations with a maximum in retention.

In an adhesion world that is often confusing, universal bonding agents provide bonding simplicity. Because of its versatility, tolerance, and performance, ALL-BOND UNIVERSAL has become the go-to bonding system in our office. DPS

ALL-BOND UNIVERSAL®

Light-Cured Dental Adhesive

HIGH PERFORMANCE CHEMISTRY.

ONE BOTTLE

COMPATIBLE

VERSATILE

DURABLE

⊘ No activator required!

Light-cured
Cements/Build-ups

Self-cured
Cements/Build-ups

Dual-cured
Cements/Build-ups

- Total-etch
- Selective-etch
- Self-etch

Third Party Comparative Bond Strength Data* (MPa)

	1 wk	6 mos
All-Bond Universal®	62.7	67.9
Clearfil™ SE Bond**	55.9	57.2
Optibond® XTR**	63.6	57.1

MDP Monomer Technology
Chemically bonds to tooth

Azeotropic Solvent System
No residual water after evaporation

*Long term micro-tensile bond strength of dental adhesives. Vargas, M.A., A. Murray. J Dent Res 92 (Spec Iss A): 560, 2013.

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