Instructions for Use
GENERAL INFORMATION

The DUO-LINK UNIVERSAL™ KIT is an adhesive cementation system designed for final cementation of ALL indirect restorations. The combination of products provides high retention and durability of crowns, bridges (fixed prostheses), onlays, inlays and posts/dowels, fabricated from metal, composite, porcelain, ceramic, zirconia, alumina, etc.

BISCO’s ALL-BOND UNIVERSAL® is a light-cured single-component dental bonding agent that offers the flexibility for total-, self- or selective-etch procedures. DUO-LINK UNIVERSAL is a dual-curing, auto-mix resin cement available in two esthetic shades, Universal and Milky White. DUO-LINK UNIVERSAL cement provides all of the desired properties for universal cementation: high radiopacity, high mechanical strength, high bond strength, low film thickness, and easy clean-up. PORCELAIN PRIMER* is known to enhance the wettability of glass substrates, providing better adaptation of cement, it also increases physical, mechanical and chemical bonding of resin cement to porcelain, and yields a greater resistance to water attack at the bonding interface. Finally, the unique chemistry of Z-PRIME™ Plus makes it a versatile primer for surface treatment of Zirconia and Alumina metal oxide ceramics as well as metals/alloys, composites and endodontic posts. Both Z-PRIME Plus and PORCELAIN PRIMER were specifically formulated to provide high bond strengths without requiring light-curing.

Indications for Use:
1. All indirect restorations (i.e. crowns, fixed prostheses (bridges), inlay, onlays fabricated from metal composite, porcelain, ceramic, zirconia, alumina, and CAD/CAM restorations)
2. All endodontic posts (i.e. fiber, composite and metal/zirconia)
3. All cement retained implant restorations (i.e. screws and crowns)
4. Veneers (composite, all-ceramic and zirconia)

Contraindication:
- Do not use ALL-BOND UNIVERSAL on patients who have a history of severe allergic reactions to methacrylate resins.

Warnings:
- Z-PRIME Plus, ALL-BOND UNIVERSAL and PORCELAIN PRIMER are highly flammable.
- This product may not be appropriate for use in patients who have a history of allergic reactions to methacrylate resins.
- Avoid splashing into the eyes. If ALL-BOND UNIVERSAL comes into contact with the eyes, flush with copious amounts of water and seek medical attention.
- The phosphoric acid in the etchant is a severe eye and skin irritant. Injury may result if the etchant is allowed to remain on the skin or mucosa for extended periods of time. If accidentally splashed into the eye, flush with copious amounts of water and seek medical attention immediately. In case of contact with other tissues, rinse immediately with plenty of water for several minutes.
- Contamination by saliva, blood, or water should be avoided during these procedures. When using dental adhesives, contamination will compromise dentin bonding and may result in decreased longevity of the restoration.
- A rubber dam is recommended for all indications where contamination may be possible.

Cautions:
- Cross-contamination: Product may contain items that are designed for one time use. Dispose of used or contaminated accessories. Do not clean, disinfect or reuse.

Precautions:
- ALL-BOND UNIVERSAL is a light-curable material. Use ALL-BOND UNIVERSAL immediately once it is dispensed in the mixing well. Prolonged exposure to air and light may lead to solvent evaporation and thickening of the adhesive.
- To avoid evaporation of ALL-BOND UNIVERSAL, keep container tightly closed.
- Z-PRIME Plus is a light sensitive material. Use Z-PRIME Plus immediately once it is dispensed in the mixing well or protect from ambient light.
- Avoid contact with the skin; unpolymerized resins may cause skin sensitization in susceptible persons. In case of contact, wash skin with soap and water.
- If ZOE containing materials have been used on the tooth structure within 2-3 weeks, adequately clean the tooth surface with an abrasive prior to adhesive use.
- The emitting tip of the dental curing light should be held as near and vertical to the resin surface as possible. If a large resin surface is to be light-cured, it is advisable to divide the area into several sections and light cure each section separately.
- Low curing light intensity causes poor adhesion.
- Working and setting times will be accelerated in the warm intraoral environment.
- To prevent polymerization or clogging, the dual-syringe mixing tip should be left in place until the next application. If used intraorally, wipe mixing tip with disinfectant prior to storage.
- See individual component labels for specific expiration dates.
- Do not use hydrogen peroxide, EDTA, or eugenol containing materials prior to bonded procedure as these materials may inhibit bonding.
- Safety data sheet available on request.
TECHNICAL INFORMATION

Working Time: Minimum 2 minutes at 22°C (71.6°F).
Setting Time: Maximum 3 minutes, 30 seconds at 37°C (98.6°F).
Working time and setting time may vary based on storage conditions, temperature, humidity, etc.
Excess material is light-cured with a LED polymerization light for 2-3 seconds per quarter surface (mesio-facial, disto-facial, disto-ligual, mesio-lingual), at a distance of approximately 0-10 mm.

INSTRUCTIONS FOR USE

Cementation of Glass Ceramics/porcelain (silica-based) or Lithium Disilicate/Silicate Restorations:

A. Restoration Preparation
1. Upon receipt of the sandblasted and HF acid etched restoration, brush on 1 coat of PORCELAIN PRIMER to the internal surface of the restoration and allow to dwell for 30 seconds. Dry with air syringe for 3-5 seconds.
2. After try-in, decontaminate the internal surface of the restoration (phosphoric acid or 2 minutes ultrasonic cleaning with ethanol will remove organic contaminants while leaving the PORCELAIN PRIMER intact). Rinse and air dry.

B. Tooth Preparation
1. Choose either the SELF-ETCHING TECHNIQUE or the TOTAL-ETCHING TECHNIQUE below.
   - SELF-ETCHING TECHNIQUE: Prepare cavity. Wash thoroughly with water spray. Use an absorbent pellet or high volume evacuation (HVE) for 1-2 seconds, to remove excess water (do not desiccate).
     NOTE: BISCO’s SELECT HV™ ETCH may be used on cut or uncut enamel to increase mechanical retention. This etchant was designed for precise selective placement.
   - TOTAL-ETCHING TECHNIQUE: Prepare cavity. Wash thoroughly with water spray. Etch enamel and dentin using an etchant for 15 seconds. Rinse thoroughly. Remove excess water by blotting the surface with an absorbent pellet or high volume evacuation (HVE) for 1-2 seconds, leaving the preparation visibly moist.
2. Dispense 1-2 drops of ALL-BOND UNIVERSAL into a clean well. Replace the cap onto the bottle promptly to avoid evaporation of solvent.
3. Apply two separate coats of ALL-BOND UNIVERSAL, scrubbing the preparation with a microbrush for 10-15 seconds per coat. Do not light cure between coats.
4. Evaporate excess solvent by thoroughly air-drying with an air syringe for at least 10 seconds; there should be no visible movement of the adhesive. The surface should have a uniform glossy appearance; otherwise, apply an additional coat of ALL-BOND UNIVERSAL and repeat Steps 2-4.
   NOTE: Due to the amount of solvent, ALL-BOND UNIVERSAL is easily spread thin and will NOT affect cementation procedures, even with tight fitting restorations.
5. Light cure for 10 seconds.
6. Continue with cementation.

C. Cementation
Cement Mixing Procedures:
1. Remove the syringe cap from the dual-syringe.
2. Dispense a small amount of material onto a mixing pad to eliminate any voids in each chamber of the dual-syringe.
3. Attach a mixing tip to the dual-syringe by lining up the key and keyway. Then turn the brown locking mechanism clockwise.
4. Pressing the plunger will mix and dispense DUO-LINK UNIVERSAL. (See “TECHNICAL INFORMATION” Section for Working and Setting Time information.)

Cementation Procedures:
1. Apply cement to the bondable surfaces of the restoration. For inlays, it may be easier to apply the cement directly to the tooth preparation.
2. Fully seat the restoration and gently remove the excess cement with a brush prior to spot curing the margins for 2-3 seconds per quarter surface (mesio-facial, disto-facial, disto-ligual, mesio-lingual).
3. Optional: after excess cement has been removed each surface of the restoration may be cured for up to 40 seconds.

Cementation of Metal, Zirconia, Alumina, Composite and Restorations:

A. Restoration Preparation
1. Upon receipt of the sandblasted restoration, brush on 1 coat of Z-PRIME Plus to the internal surface of the restoration. Dry with air syringe for 3-5 seconds.
2. After try-in, decontaminate the internal surface of the restoration (phosphoric acid or 2 minute ultrasonic cleaning with ethanol will remove organic contaminants while leaving the Z-PRIME Plus intact). Rinse and air dry.

B. Tooth Preparation
1. Choose either the SELF-ETCHING TECHNIQUE or the TOTAL-ETCHING TECHNIQUE below.
   - SELF-ETCHING TECHNIQUE: Prepare cavity. Wash thoroughly with water spray. Use an absorbent pellet or high volume evacuation (HVE) for 1-2 seconds, to remove excess water (do not desiccate).
     NOTE: BISCO’s SELECT HV ETCH may be used on cut or uncut enamel to increase mechanical retention. This etchant was designed for precise selective placement.
   - TOTAL-ETCHING TECHNIQUE: Prepare cavity. Wash thoroughly with water spray. Etch enamel and dentin using an etchant for 15 seconds. Rinse thoroughly. Remove excess water by blotting the surface with an absorbent pellet or high volume evacuation (HVE) for 1-2 seconds, leaving the preparation visibly moist.
2. Dispense 1-2 drops of ALL-BOND UNIVERSAL into a clean well. Replace the cap onto the bottle promptly to avoid evaporation of solvent.
3. Apply two separate coats of ALL-BOND UNIVERSAL, scrubbing the preparation with a microbrush for 10-15 seconds per coat. Do not light cure between coats.
4. Evaporate excess solvent by thoroughly air-drying with an air syringe for at least 10 seconds; there should be no visible movement of the adhesive. The surface should have a uniform glossy appearance; otherwise, apply an additional coat of ALL-BOND UNIVERSAL and repeat Steps 2-4. 

**NOTE:** Due to the amount of solvent, ALL-BOND UNIVERSAL is easily spread thin and will NOT affect cementation procedures, even with tight fitting restorations.
5. Light cure for 10 seconds.
6. Continue with cementation.

### C. Cementation

#### Cement Mixing Procedures:

1. Remove the syringe cap from the dual-syringe.
2. Dispense a small amount of material onto a mixing pad to eliminate any voids in each chamber of the dual-syringe.
3. Attach a mixing tip to the dual-syringe by lining up the key and keyway. Then turn the brown locking mechanism clockwise.
4. Pressing the plunger will mix and dispense DUO-LINK UNIVERSAL. (See “TECHNICAL INFORMATION” Section for Working and Setting Time information.)

#### Cementation Procedures:

1. Apply cement to the bondable surfaces of the restoration. For inlays, it may be easier to apply the cement directly to the tooth preparation.
2. Fully seat the restoration and gently remove the excess cement with a brush prior to spot curing the margins for 2-3 seconds per quarter surface (mesio-facial, disto-facial, disto-lingual, mesio-lingual).
3. Optional: after excess cement has been removed each surface of the restoration may be cured for up to 40 seconds.

#### Cementation of Posts/Dowels:

Please follow the preparation instructions for use of the post to be used. The following procedure for cementation is recommended:

#### A. Treatment of Post/Dowel

1. Clean the post with alcohol and dry it with water-free and oil-free air.
2. Apply 1-2 coats of Z-PRIME Plus, uniformly wetting the entire post surface. Dry with an air syringe for 3-5 seconds. Z-PRIME Plus is recommended for bonding all metal, oxide-ceramic, and composite/fiber posts.

#### B. Preparation of Root Canals

1. Isolate the area and treat the root canal endodontically as usual.
2. Clean and irrigate. Rinse with water, dry with paper tips.
3. If using the SELF-ETCHING TECHNIQUE, proceed directly to step #4. If using the TOTAL-ETCHING TECHNIQUE, etch the canal with phosphoric acid for 15 seconds. Rinse thoroughly and remove excess water with a brief burst of air and paper point(s) to remove any pooled water from the canal; proceed to step #4.
4. Dispense 1-2 drops of ALL-BOND UNIVERSAL into a clean well. Replace the cap onto the bottle promptly to avoid evaporation of solvent.
5. With an endodontic brush, apply and scrub two separate coats of ALL-BOND UNIVERSAL into the canal. Do not light cure between coats.
6. Remove excess pooling of material with paper points and light suction. Follow with a gentle stream of air to thoroughly air dry.

**NOTE:** The paper point step is important for removal of any pooled adhesive so that there is no interference in complete seating of the post.
7. Light cure for 10 seconds.
8. Continue with cementation.

#### C. Cementation

#### Cement Mixing Procedures:

1. Remove the syringe cap from the dual-syringe.
2. Dispense a small amount of material onto a mixing pad to eliminate any voids in each chamber of the dual-syringe.
3. Attach a mixing tip to the dual-syringe by lining up the key and keyway. Then turn the brown locking mechanism clockwise.
4. Pressing the plunger will mix and dispense DUO-LINK UNIVERSAL. (See “TECHNICAL INFORMATION” Section for Working and Setting Time information.)

#### Cementation Procedures:

1. Using the root canal mixing tip inject DUO-LINK UNIVERSAL into the canal. Start at the apical end of the canal and withdraw the tip slowly while keeping the tip in the cement to minimize voids.
2. Coat the apical end of the post/dowel with cement.
3. Seat the post into the canal gently and maintain firm pressure for 20-30 seconds once the post is seated.
4. Optional: after excess cement has been removed, light cure for 40 seconds from occlusal.
HYGIENE: Use of commonly available hygienic protective covering to avoid any contamination of the DUO-LINK UNIVERSAL auto-mix dual-syringes during the treatment is recommended.

DISPOSAL: Refer to community provisions relating to waste. In their absence, refer to national or regional provisions relating to waste.

STORAGE: Store kit at room temperature (20°C/68°F - 25°C/77°F). See individual component labels for specific expiration dates.

WARRANTY: BISCO, Inc. recognizes its responsibility to replace products if proven to be defective. BISCO, Inc. does not accept liability for any damages or loss, either direct or consequential, stemming from the use of or inability to use the products as described. Before using, it is the responsibility of the user to determine the suitability of the product for its intended use. The user assumes all risk and liability in connection therewith.

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