

*Bisco*

CE0459

***BIS-SILANE™***

*2-Part Porcelain Primer*

## Instructions for Use



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**Caution:** U.S. Federal law restricts this device to sale by or on the order of a licensed Dentist.

# **BIS-SILANE™\***

## **2-Part Porcelain Primer**

### **GENERAL INFORMATION**

**BIS-SILANE** is a two-part silane coupling agent that is used to enhance adhesion between porcelain and composite resins. Based on clinical experience, it has been noted that the silane, as packaged in the one-bottle systems, tends to polymerize as it approaches the end of its shelf life. The two-bottle silane system offers a more stable system to ensure effective bonding to porcelain. **BIS-SILANE** is an ethanol-based product and therefore is less volatile than other acetone-based silane products, also helping to ensure its effectiveness.

Silane is a dual function monomer consisting of a silanol group that reacts with the porcelain surface, and a methacrylate group that co-polymerizes with the resin matrix of the composite. Silane coupling agents are known to enhance the wettability of glass substrates by composite resins, increase physical, mechanical and chemical bonding of composite to porcelain, and yield a greater resistance to water attack at the bonding interface.

Prior to applying **BIS-SILANE**, the porcelain surface must be etched with PORCELAIN ETCHANT\* (4% or 9.5% buffered hydrofluoric acid). This process allows porcelain to become not only highly porous, but also highly receptive to the silane by creating reactive hydroxyl groups on the surface of the porcelain.

#### **Indications For Use:**

- A. Bonding Etched Porcelain/Lithium Disilicate Restorations
- B. Repair of Porcelain/Lithium Disilicate Restorations
- C. Repair of Porcelain-Fused-to-Metal
- D. Repair of Porcelain-Fused-to-Zirconia/Alumina

#### **Warnings:**

- Avoid splashing into the eyes. If **BIS-SILANE** comes into contact with the eyes, flush with copious amounts of water and seek medical attention.
- Isolation required for intra-oral repairs, contamination will seriously compromise bonding.
- **BIS-SILANE** is highly flammable.

#### **Precautions:**

- Avoid contact with the skin; **BIS-SILANE** may cause skin sensitization in susceptible persons. In case of contact with the skin, wash thoroughly with soap and water.
- Refer to individual component labels for specific expiration dates.

\* **BIS-SILANE** is a trademark of BISCO, Inc.  
PORCELAIN ETCHANT is manufactured by BISCO, Inc.

## INSTRUCTIONS FOR USE

**IMPORTANT:** Since different ceramics require different surface treatments, contact laboratory for proper surface treatment instructions.

### **A. Bonding Etched Porcelain/Lithium Disilicate Restorations:**

**NOTE:** If the laboratory has not etched the porcelain restoration, contact lab and/or ceramic manufacturer for proper etching instructions. Related BISCO products include 4% and 9.5% PORCELAIN ETCHANTS (Buffered Hydrofluoric Acid Gels).

1. Mix the **BIS-SILANE** by dispensing one drop from each of the two bottles (Parts A & B) into a mixing well and stir. Brush on 1-2 coats (thin coats are sufficient) of **BIS-SILANE** to the internal surface of the etched porcelain restoration and wait for 30 seconds. Dry with (warm) air syringe.

**NOTE:** Surface of the porcelain will look the same prior to and after **BIS-SILANE** application.

2. Apply a thin layer of PORCELAIN BONDING RESIN\* (HEMA-free resin) to the internal surface of the restoration. Do NOT light cure!  
**OR** apply adhesive according to manufacturer's instructions.
3. Continue with cementation procedures.

### **B. Repair of Porcelain/Lithium Disilicate Restorations:**

1. Isolate the area to be repaired.
2. Remove the glaze and bevel (45 degree) the porcelain around the area to be repaired. Sandblast entire area or abrade with a coarse diamond bur. Rinse with water and air dry.
3. Place BARRIER GEL\* on gingival tissue that may be exposed or porcelain to protect areas where etching is not desired.
4. Apply PORCELAIN ETCHANT\* (9.5% HF) to the dry porcelain surface for 90 seconds. Continue to observe the etch site throughout the entire procedure. Suction the PORCELAIN ETCHANT, then rinse with a copious amount of water and air dry. The etched surface should appear dull and frosty.
5. Clean the etched porcelain by applying UNI-ETCH\*\* and agitate for 20 seconds to remove any salts. Rinse and dry thoroughly.
6. Apply 1 thin coat of **BIS-SILANE** to the etched porcelain surface and allow to dwell for 30 seconds. Dry with (warm) air syringe.
7. Apply a layer PORCELAIN BONDING RESIN or adhesive, air dry/air thin.
8. Complete the repair using a microhybrid composite (e.g. **ÆLITE™**\* All-Purpose Body) and finish/polish.

### **C. Repair of Porcelain-Fused-to-Metal:**

1. Isolate the area to be repaired.
2. Remove the glaze and bevel the porcelain (45 degree) around the area to be repaired. Sandblast entire area or abrade with a coarse diamond bur. Rinse with water and air dry.

\* UNI-ETCH is a registered trademark of BISCO, Inc.

ÆLITE is a trademark of BISCO, Inc.

PORCELAIN BONDING RESIN, BARRIER GEL and PORCELAIN ETCHANT are manufactured by BISCO, Inc.

3. Place BARRIER GEL on gingival tissue and metal that may be exposed to protect areas where etching is not desired.
4. Apply PORCELAIN ETCHANT (9.5% HF) to the dry porcelain surface for 90 seconds. Continue to observe the etch site throughout the entire procedure. Suction the PORCELAIN ETCHANT, then rinse with a copious amount of water and air dry. The etched surface should appear dull and frosty.
5. Clean the etched porcelain by applying UNI-ETCH and agitate for 20 seconds to remove any salts. Rinse and dry thoroughly.
6. Apply 1 thin coat of **BIS-SILANE** to the etched porcelain surface and allow to dwell for 30 seconds. Dry with (warm) air syringe.
7. Apply 1-2 coats of Z-PRIME™\* Plus to the exposed metal and dry with an air syringe for 3-5 seconds.
8. Shake OPAQUER\* Base and Catalyst bottles well before dispensing. Dispense one drop each of Catalyst and Base onto a mixing pad, and mix with a brush tip. Apply a thin coat of OPAQUER only to the metal surface and allow to self cure, or light cure for 5 seconds.
9. Apply a layer of PORCELAIN BONDING RESIN or adhesive, air dry/air thin.
10. Complete the repair using a microhybrid composite (e.g. ÆLITE All-Purpose Body) and finish/polish.

**D. Repair of Porcelain-Fused-to-Zirconia/Alumina:**

1. Isolate the area to be repaired.
2. Remove the glaze and bevel the porcelain (45 degree) around the area to be repaired. Sandblast entire area or abrade with a coarse diamond bur. Rinse with water and air dry.
3. Place BARRIER GEL on gingival tissue and alumina/zirconia that may be exposed to protect areas where etching is not desired.
4. Apply PORCELAIN ETCHANT (9.5% HF) to the dry porcelain surface for 90 seconds. Continue to observe the etch site throughout the entire procedure. Suction the PORCELAIN ETCHANT, then rinse with a copious amount of water and air dry. The etched surface should appear dull and frosty.
5. Clean the etched porcelain by applying UNI-ETCH and agitate for 20 seconds to remove any salts. Rinse and dry thoroughly.
6. Apply 1 thin coat of **BIS-SILANE** to the etched porcelain surface and allow to dwell for 30 seconds. Dry with (warm) air syringe.
7. Recommended: Apply 1-2 coats of Z-PRIME Plus to the exposed zirconia/alumina and dry with an air syringe for 3-5 seconds.
8. Apply a layer of PORCELAIN BONDING RESIN or adhesive over porcelain & zirconia or alumina, air dry/air thin.
9. Complete the repair using a microhybrid composite (e.g. ÆLITE All-Purpose Body) and finish/polish.

\* Z-PRIME is a trademark of BISCO, Inc.  
OPAQUER is manufactured by BISCO, Inc.

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

**STORAGE:** Store at room temperature (20°C/68°F - 25°C/77°F).

**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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