

Bisco

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RESINOMER™

*Dual-
Cured*

Amalgam Bonding/Luting System

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.

RESINOMER™*

Amalgam Bonding/Luting System

GENERAL INFORMATION

RESINOMER is a dual-cured composite with viscosity and flow characteristics that make it ideal for bonded amalgam restorations, as a dental liner and as a luting cement. The hydrophilic monomers used in **RESINOMER** are based on ALL-BOND 2®* chemistry and promote adhesion to dental metals. Chemical adhesion occurs between the metallic surface and diarylsulfone dimethacrylate (DSDM), one of the monomers present in **RESINOMER**. The metal bonding capability provides an exceptional environment for bonded amalgam restorations. A tenacious mechanical bond is created as amalgam is condensed into the uncured **RESINOMER** layer. In addition to adhesive bonding, **RESINOMER** provides a highly effective seal against microleakage¹. **RESINOMER** is intended for use with adhesives designed for compatibility with all dental materials, including all BISCO adhesives. **RESINOMER's** bond to ALL-BOND 2 produces resin adhesion that exceeds the cohesive strength of dentin².

Indications for Use:

The principal uses of **RESINOMER** are:

1. Bonded Amalgam Restorations
2. Liner/Base under Direct/Indirect Restorations
3. Cementation of Metal-Based Restorations
4. Cementation of Fiber and Metallic Posts
5. Bonding Orthodontic Brackets

Warnings:

- This product may not be appropriate for use in patients who have a history of allergic reactions to methacrylate resins.
- When using dental adhesives, saliva and oral fluid contamination will seriously compromise dentin bonding.

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:

- Avoid contact with the skin; unpolymerized resins may cause skin sensitization in susceptible persons. In case of contact, wash skin with soap and water.
- Store in refrigerator when not in use. Allow refrigerated **RESINOMER** to reach room temperature before use.
- Working and setting times will be accelerated in the warm intraoral environment.
- If using ALL-BOND 2, the cement will set quickly once it comes in contact with the primers on the tooth.
- 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.
- Unlike BISCO adhesives, not all bonding systems are chemically compatible with self-cured or dual-cured materials. Refer to the adhesive manufacturer's instructions.
- Do not use hydrogen peroxide, EDTA, or eugenol containing materials prior to the adhesive procedure as these materials may inhibit bonding.
- Safety data sheet available on request.
- Safety data sheet available at www.Bisco.com.

TECHNICAL INFORMATION

Individual Syringes:

Working Time: Minimum 3 min. (At Room Temperature, 20°C/68°F -25°C/77°F)

Setting Time: Maximum 3 min. 20 sec. (Intraoral, 37°C/98.6°F)

Dual-Syringes:

Working Time: Minimum 2 min. (At Room Temperature, 20°C/68°F-25°C/77°F)

Setting Time: Maximum 3 min. 20 sec. (Intraoral, 37°C/98.6°F)

Working time and Setting time may vary based on storage conditions, temperature, humidity, etc.

NOTE: Due to the unique chemistry of **RESINOMER**, refrigeration is necessary. Allow refrigerated **RESINOMER** to reach room temperature before use.

NOTE: **RESINOMER** left on the mixing pad may appear not to set. This is due to oxygen inhibition of the polymerization process. Rest assured, **RESINOMER** will polymerize (set) in a normal fashion. The user can confirm this by placing a mylar strip over the excess material on the pad; it will set within the specified period of time.

INSTRUCTIONS FOR USE

BONDED AMALGAM RESTORATIONS

1. Use a matrix band with non-stick coating, or rub wax over the area that will be exposed to **RESINOMER** to prevent adhesion to the band.
2. Isolate tooth and prepare the cavity in a conservative manner. Clean the entire surface with a slurry of pumice and a cleanser such as CAVITY CLEANSER™* or water.
3. Etch using an etchant, such as UNI-ETCH®* w/BAC or ETCH-37™* w/BAC, according to manufacturer's instructions.
4. Apply an adhesive that is compatible with all dental materials according to manufacturer's instructions.
5. If using the dual-syringe delivery system, follow the enclosed DUAL SYRINGE INSTRUCTIONS for dispensation and delivery of **RESINOMER**. If using individual syringes, mix equal amounts of **RESINOMER** base and catalyst into a uniform paste (10-15 seconds) until the paste is a uniform color.
6. Apply a thin coat of **RESINOMER** to all internal surfaces of the preparation. Air-thin to spread **RESINOMER**, avoiding pooling on the floor or internal line angles of the preparation.
7. Triturate and condense amalgam into **RESINOMER**-lined preparation using traditional condensation procedures. Do not be concerned with displacement of **RESINOMER**.
8. Slightly overfill, condense and burnish amalgam over margins and begin carving as soon as possible. Finish carving before the amalgam has completely hardened. Burnish during and after carving to enhance the bond and seal the margins. A slight flash of amalgam onto the enamel surface is desirable and may be unavoidable due to the adhesive qualities of **RESINOMER**.
9. OPTIONAL: **RESINOMER** is dual-curable. To expedite the polymerization, light cure for 20 seconds.

NOTE: **RESINOMER** left on the mixing pad may appear not to set. This is due to oxygen inhibition of the polymerization process. Rest assured, **RESINOMER** will polymerize (set) in a normal fashion. The user can confirm this by placing a mylar strip over the excess material on the pad; it will set within the specified period of time.

LINER/BASE UNDER DIRECT/INDIRECT RESTORATIONS

1. Isolate tooth and prepare the cavity in a conservative manner. Clean the entire surface with a slurry of pumice and a cleanser such as CAVITY CLEANSER or pumice and water.
2. Etch using an etchant, such as UNI-ETCH w/BAC or ETCH-37 w/BAC, according to manufacturer's instructions.
3. Apply an adhesive that is compatible with all dental materials according to manufacturer's instructions.
4. If using the dual-syringe delivery system, follow the enclosed DUAL-SYRINGE INSTRUCTIONS FOR USE for dispensation and delivery of **RESINOMER**. If using individual syringes, mix equal amounts of **RESINOMER** base and catalyst into a uniform paste (10-15 seconds) until the paste is a uniform color.

5. Apply a thin coat of **RESINOMER** to the floor or desired internal area of the preparation.
6. Light cure **RESINOMER** for 30 seconds or allow to self-cure (preferred method) for 5 minutes.
7. Proceed with restorative treatment.

METAL-BASED RESTORATION CEMENTATION

A. Tooth Preparation

1. Remove provisional restorations; clean the preparation and try-in the definitive restoration.
2. Etch using an etchant, such as UNI-ETCH w/BAC or ETCH-37 w/BAC, according to the manufacturer's instructions.
3. Apply an adhesive that is compatible with all dental materials according to manufacturer's instructions.

B. Cementation

1. Sandblast the internal surfaces of the restoration, rinse and dry.
2. Apply a metal primer to the internal surface of the restoration according to manufacturer's instructions.
3. If using the dual-syringe delivery system, follow the enclosed DUAL-SYRINGE INSTRUCTIONS FOR USE for dispensation and delivery of **RESINOMER**. If using individual syringes, mix equal amounts of **RESINOMER** base and catalyst into a uniform paste (10-15 seconds) until the paste is a uniform color.
4. Fill the internal surface of the restoration with **RESINOMER**.
5. Seat the restoration with passive pressure.
6. Remove excess with a brush or instrument. Complete clean-up during the initial set or gel state.

FIBER AND METALLIC POST CEMENTATION

A. Post Space Preparation

1. Etch using an etchant, such as UNI-ETCH w/BAC or ETCH-37 w/BAC, according to manufacturer's instructions, and rinse with water.
2. Blot the canal dry with a large paper point, to remove excess moisture.
3. Apply an adhesive that is compatible with all dental materials according to manufacturer's instructions.
4. Blot the canal dry with a paper point; repeat with a new paper point until the paper point returns dry from the canal. This step is important for removal of any pooled primers to prevent interference in complete seating of the post.
5. Light cure as necessary, according to manufacturer's instructions.

B. Post Cementation

1. Coat the post with adhesive and light cure, according to manufacturer's instructions.
2. If using the dual-syringe delivery system, follow the enclosed DUAL-SYRINGE INSTRUCTIONS FOR USE for dispensation and delivery of **RESINOMER**. If using individual syringes, mix equal amounts of **RESINOMER** base and catalyst into a uniform paste (10-15 seconds) until the paste is a uniform color.
3. Using the root canal mixing tip, or a needle tip, inject **RESINOMER** 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.
4. Coat the apical end of the post with cement. Seat the post into the canal gently and maintain firm pressure for 20-30 seconds once the post is seated.
5. Remove excess cement and allow to self cure (preferred method) for 5 minutes. As soon as cement has set, proceed with restorative treatment.

BONDING ORTHODONIC BRACKETS

1. Etch enamel surface to be bracketed using an etchant, such as UNI-ETCH w/BAC or ETCH-37 w/BAC, for 15-30 seconds. The area required to be etched is only slightly larger than the bracket base. Rinse well with water and air dry.
2. Apply an adhesive that is compatible with all dental materials according to manufacturer's instructions to the etched enamel surface. Light cure adhesive.
3. If using the dual-syringe delivery system, follow the enclosed DUAL-SYRINGE INSTRUCTIONS FOR USE for dispensation and delivery of **RESINOMER**. If using individual syringes, mix equal amounts of **RESINOMER** base and catalyst into a uniform paste (10-15 seconds) until the paste is a uniform color.

4. Apply a small amount of **RESINOMER** to the retentive side of the bracket base.
5. Place the bracket on the enamel surface with a slight rotational motion and position bracket appropriately.
With an explorer or sharp scaler, press the bracket firmly against the enamel to express excess paste.
6. Remove excess paste surrounding the bracket base with an explorer or scaler.
7. Light cure **RESINOMER** for 30 seconds by placing the light probe at a 45° angle to the enamel/bracket interface.
8. The bracket may be moderately loaded after light-curing **RESINOMER**.

HYGIENE: Use of commonly available hygienic protective covering to avoid any contamination of the **RESINOMER** syringes during treatment is recommended.

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

STORAGE: **RESINOMER** should be refrigerated (2°C/36°F - 8°C/46°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.

* RESINOMER, CAVITY CLEANSER and ETCH-37 are trademarks of BISCO, inc.

ALL-BOND 2 and UNI-ETCH are registered trademarks of BISCO, Inc.

1. CRA Newsletter, February 1994, Adhesives, Silver Amalgam.
2. Farah, J. W. (ed.) Adhesive Resin Cements, Dental Advisor 10:(4) 6-7, 1993.

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