



Manufactured in U.S.A. by:

SCI-PHARM 

Sci-Pharm Cat. No. 50-26

MICROJOIN[®]

Crown and Bridge Adhesive/Cement
In Automix Version

TECHNICAL BULLETIN

Instructions

MICROJOIN[®]

CROWN AND BRIDGE ADHESIVE/CEMENT

A reinforced polymeric cement with a protective dentin sealer in automix version

KIT COMPONENTS:

- Cat. No. 50-256, 6g of Adhesive in Automix Syringes (3 in the kit, 18g total)
- Cat. No. 50-253, 15cc of Dentin Sealer
- Cat. No. 50-254, 2g of Enamel Conditioner
- Accessories & Instructions

Cat. No. 50-26



U.S. Patent 4,396,378

INDICATIONS

Designed for cementing conventional cast restorations on most vital and non-vital teeth as well as for cementing bonded bridges with cast and etched or perforated bases. Also suitable for cementing prefabricated laminate veneers.

OUTSTANDING FEATURES OF THE MATERIAL

- Ease of dispensing, no mixing required.
- Good reproducibility of working time.
- Low film thickness of below 10 microns.
- Excellent resistance to oral environment and mechanical strength assure good long-term performance.
- Convenient , 120-150 sec., working time.
- Kit contains a special dentin sealer for pulp protection and alleviation of post procedural sensitivity.

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CAUTION: Federal law restricts this device to sale by or on the order of a dentist.

ADDITIONAL INFORMATION

- A. The cap of the dentin sealer should be replaced immediately after use to prevent solvent evaporation.
- B. *Microjoin*[®] may also be used for cementing prefabricated laminate veneers, ceramic crowns, inlays and onlays. When bonding to etched porcelain or glass, the use of Porcelain Conditioner (Sci-Pharm Catalog No. 50-064) will enhance bonding strength.

STORAGE AND SHELF-LIFE

Store at temperatures not exceeding 73°F (23°C). When stored under such conditions, the material has a shelf-life of 2 years. Refrigerate when the material is not in use (for example, overnight and on weekends). For easier handling, remove from refrigeration at least 15 minutes prior to use.

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For technical information, call or write:



Quality Management System Certified to

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CE Marked Products

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INSTRUCTIONS FOR USE

Good moisture control is important throughout the cementation procedure to prevent contamination of the prepared tooth surfaces and the setting cement. This can be achieved through the use of a rubber dam or tissue retraction cord and cotton rolls with evacuation.

PREPARATION FOR CEMENTING

A. Conventional Cast Restorations

1. *Microjoin*® works best on well-fit restorations, where its low film thickness is a highly desirable feature. It is not recommended for cementing loose-fit restorations.
2. Microblasting of the internal surface of the prosthesis with 25-micron aluminum oxide is recommended. This will help create a clean surface with irregularities to provide better retention. Residual aluminum oxide can be removed by using an ultrasonic cleaner or scrubbing with a clean toothbrush under running water. Disinfect, and rinse thoroughly with water and dry.
3. In order to assure best seal and retention, the preparation should be cleaned of all residues of temporary cement, especially in situations where zinc oxide/eugenol type cements have been used (we recommend the use of a non-eugenol temporary cement, such as Sci-Pharm's *Until*®, Cat. No. 55-25).

a. ON ENAMEL:

Apply etching agent (**CAUTION:** contains phosphoric acid) with a dabbing motion to the prepared tooth surface for 30 seconds. Rinse and dry thoroughly with oil-free air. Apply one layer of dentin sealer over the exposed dentin. Allow to dry for 45 seconds before cementing.

b. ON DENTIN:

Prepared tooth surfaces should be clean and dry. Apply one layer of dentin sealer and allow to dry for 45 seconds. Apply a second layer in case of sensitive teeth or grossly reduced preparations and allow to dry for 45 seconds. Deep areas of the preparation may require application of calcium hydroxide liner. Remove excess sealer or liner from the margins.

B. Bonded Bridges

1. The abutment teeth must be cleaned with a pumice slurry that does not include oils or fluoride. The enamel surface to be bonded should be etched with the enamel conditioner using a dabbing motion for 30 seconds. Rinse the teeth with copious amounts of water and then dry with clean, warm air.

CAUTION: It is important not to touch the etched surface of the bonded bridge restoration. The contaminated etched surface can be cleaned with acetone or methylethyl ketone.

2. Place mylar matrix strips on proximating teeth to avoid bonding them to the prosthesis.

APPLICATION

In case of direct pulp exposure, use a calcium hydroxide-type base to cap the pulp.

As with all synthetic cements which are hydrophobic by nature, it is imperative to disinfect and dry the preparation before cementing. The presence of moisture may result in inferior retention, possibility of microbial contamination, and post-operative sensitivity. Unless counter-indicated for the reason of proximity to the pulp, the removal of smear layer prior to cementing will further contribute to enhanced retention and greater integrity of the tooth/cement interface.

Treatment of the abutment for 30 seconds with antimicrobial solutions such as 2% sodium hypochlorite (NaOCl)* contributes to a lower incidence of post-operative sensitivity and prevents occasional abutment discoloration and odor due to microbial growth. On sensitive teeth and for patients with no known allergic reaction, sodium hypochlorite may be substituted with Erythromycin (250mg/5ml). Treatment with antimicrobial agents should be preceded by impression taking and followed by rinsing and drying.

* 2% solution of sodium hypochlorite may be prepared by diluting commercial 5% hypochlorite bleach with water in a 4:6 ratio.

INSTRUCTIONS FOR CEMENTING

1) Remove cap from the dual barrel syringe unit by turning it 90° counter clockwise and pulling.

Before attaching static mixer, gently push the handle until both pastes are flowing evenly from their orifices.

2) Attach the static mixer (dispenser tip) and lock it in position by turning clockwise.

3) Dispense and spread evenly a desired amount of mixed cement on the internal surfaces of the restoration. Firmly set it in the mouth. Trim away excess cement, after the material starts to set (approximately 2 minutes).

4) Remove the static mixer from the dual barrel syringe unit and replace the cap.

Microjoin® allows working time of approximately 75 seconds. Full cure will occur within 2.5-3 minutes after the material is exposed to body temperature.

TECHNICAL DATA	
Film Thickness	10 microns
Adhesion to etched human enamel	ca 1200 psi (8.3 MPa)
Relative adhesion to gold*	9-10
Diametral Tensile Strength @ 30 mins	4200 psi (29 MPa)
Compressive Strength	24,000 psi (165 MPa)
Solubility in water	Below 0.2%
Hardness, Barcol	40-42

*Blasted with 20 micron alumina. Relative to the adhesion of Zn Phosphate Cement taken as 1. Data for other cements: glass ionomer 4-4.5, polycarboxylate cement 6-7.5.