



Manufactured in U.S.A. by:

SCI-PHARM



Sci-Pharm
MICROJOIN®
Crown and Bridge Adhesive/Cement

TECHNICAL BULLETIN
Instructions

MICROJOIN®

Crown and Bridge Adhesive/Cement

A reinforced polymeric cement with a protective dentin sealer

KIT CONTAINS:

Cat. No. 50-251, Part A Adhesive, 10g
Cat. No. 50-252, Part B Adhesive, 10g
Cat. No. 50-253, Dentin Sealer, 15cc
Cat. No. 50-254, Enamel Conditioner, 2g
Cat. No. 50-255, Part A Opaquer, 3g
Accessories & Instructions

Cat. Nos. 50-25



U.S. Patent 4,396,378

OUTSTANDING FEATURES OF THE MATERIAL

- Designed for cementing conventional cast restorations on most vital and non-vital teeth as well as for cementing bonded bridges of both cast and etched (Maryland) and perforated base (Rochette) types. Also suitable for cementing prefabricated laminate veneers.
- Insoluble in oral fluids.
- Convenient, easy-to-apply and reliable; 180-second working time.
- Low film thickness (10 microns).
- Kit contains a special dentin sealer for pulp protection and alleviation of post-operative sensitivity.

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CAUTION

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

INSTRUCTIONS FOR USE

Good moisture control is important throughout the cementation procedure to prevent contamination of both 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 casting with 25-micron aluminum oxide is recommended. This will help create a clean surface with irregularities to provide additional retention. Residual aluminum oxide can be removed by using an ultrasonic cleaner or scrubbing with a clean toothbrush under running water. Disinfect casting and rinse thoroughly with water.
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. Non-vital teeth:

Apply etching agent (**CAUTION:** contains phosphoric acid) with a dabbing motion to the prepared tooth surface for 45 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. Vital teeth:

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. Maryland and Rochette 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 45-60 seconds. Rinse the teeth with copious amounts of water for a minimum of 60 seconds and then dry with clean, warm air.

CAUTION: *It is important not to touch the etched surface of the Maryland Bridge restoration. The contaminated etched surface can be cleaned with acetone or methylethylketone.*

- Place mylar matrix strips on proximating teeth to avoid bonding them to the bridge.

CEMENTING

- Dispense approximately equal amounts of Part A and B pastes on a mixing pad by slowly pushing the plunger forward. Remove the material dispensed at the tip of the syringe and pull back the handle to suck back the excess. Replace the caps after dispensing. Use Opaque Part A (small syringe) for cementing bonded (Maryland or Rochette) bridges, in order to mask the darkness of the teeth.
- Spatulate the two pastes together for approximately 20 seconds. Make certain the two pastes are well blended with no residual streaks of each paste evident in the mixture.
- Place a sufficient quantity of the mixture on the restoration. Make certain that all surfaces are covered with cement. Place a small amount of the cement in the gingival aspects of the preparation and immediately follow with placement of the restoration.
- Hold the restoration under constant pressure for 90 seconds. Keep moisture away from the cemented restoration during this period.
- Remove excess cement from the margins with a carver or scaler prior to onset of initial set (gel stage). Once initial set has begun, do not attempt to remove excess cement as the material may be pulled from under the margins. The cement will fully harden in three minutes.

TECHNICAL DATA	
Film Thickness	10 microns
Adhesion to etched human enamel	1200 psi (8.3 MN/m ²)
Relative adhesion to gold*	9-10
Diametral Tensile Strength @ 30 mins	4200 psi (29 MPa)
Compressive Strength	24,000 psi (165 MPa)
Working time at 23°C (73°F)**	160 seconds
Setting time at 23°C (73°F)	Max. 5 min.
Solubility in water	Below 0.2%

*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.

**If a shorter curing time is required, mix the pastes in a proportion of approximately 1.5 Part A to 1 Part B. This will accelerate curing time by about 45 seconds. Curing time may be prolonged by refrigerating the material just before use.

ADDITIONAL INFORMATION

- A. The cap of the dentin sealer should be replaced immediately after use because the solvent is quite volatile.
- B. The adhesive, when mixed in larger amounts, generates heat while curing. The raise in temperature may be noticeable on the mixing pad but is irrelevant in a clinical situation because of the small amounts of material involved and because of the heat absorbing capacity of the restoration. It is necessary, however, to remove excess adhesive from the soft tissue before it starts to set.
- C. In situations where the distance to the pulp may be less than 1mm, an underlayer of calcium hydroxide base is indicated.
- D. In order to facilitate the removal of the excess cement, a lubricant or separating agent may be applied outside of the crown; care should be taken not to contaminate the inside of the crown.
- E. *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). When cold, the material has a stiffer consistency. For easier handling, remove from refrigeration at least 15 minutes prior to use.

When reordering the kit or components, refer to the following catalog numbers:

ITEM	CATALOG NO.
Microjoin Kit	50-25
Part A Adhesive, 10g	50-251
Part B Adhesive, 10g	50-252
Dentin Sealer, 15cc	50-253
Enamel Conditioner, 2g	50-254
Part A Opaquer, 3g	50-255
Disposable Brushes (set of 40) and handle	30-30

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Quality Management System Certified to
ISO 9001 and ISO 13485

For technical information, call or write:

CE Marked Products



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