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#SMT3084

Medi DC Bond Dental Bonding Agent

1. INTRODUCTION

Medi DC Bond is a dual-cure (light /Chemical), two-component, single step bonding material that accommodates simultaneous treatment of both dentin and enamel.

2. INDICATIONS

Medi DC Bond indicated for the following applications:

- [1] Core build-ups using dual (Light/Chemical) cure composite resin
- [2] Direct restorations using (light/chemical) composite resin
- [3] Cavity sealing as a pretreatment for indirect restorations
- [4] Treatment of exposed root surfaces
- [5] Intraoral repairs of fractured crowns/bridges made of ceramics

3. CONTRAINDICATION

Patients with a history of hypersensitivity to methacrylate monomers

4. POSSIBLE SIDE EFFECT

The oral mucosa membrane may respond in contacted by the product due to the coagulation of protein.

5. INCOMPATIBILITIES

[1] Do not use eugenol-containing materials for pulp protection or temporary sealing, since the eugenol could retard the bonding system curing process.

[2] Do not use hemostatic agents, especially those containing ferric compounds, since these materials may impair adhesion and may cause discoloration at the tooth margin or surrounding gingiva due to ferric ions that may remain.

6. PRECAUTIONS

1. Safety precautions

1. Avoid using the product on patients with a known history of hypersensitivity to methacrylate monomers.
2. If the patient demonstrates a hypersensitivity reaction, such as rash, eczema, features of inflammation, ulcer, swelling, itching, or numbness, discontinue the use of the product and seek medical attention.
3. Use caution when using the product to prevent contact with the soft oral tissue or skin. If the product comes in contact with the soft oral tissue or skin, wipe away with a cotton pledget moistened with alcohol and immediately rinse with copious amounts of water. Prior to use, cover the patient's eyes with a towel or safety glasses to protect from splashing materials. If the product gets in the eye, immediately rinse with copious amounts of water and consult an ophthalmologist.
4. Use caution when using the product to prevent swallowing.
5. Avoid looking directly at the curing light; take necessary protective measures.

6. Do not use the same Disposable brush tip for different patients to prevent cross contamination. Discard the tip after use and sterilize the
- Brush tip handle after each patient.
7. Avoid direct contact with the skin and / or soft tissue to prevent hypersensitivity. Wear gloves or take appropriate precautions when using the product.

2. Handling and manipulation precautions

1. Do not use a spiral filler (lentulo spiral) for loading the paste into the root canal.
 2. Dispense **Medi DC Bond** Liquid A and B from the containers by pointing the container downward and as vertically as possible; careful dispensing is necessary otherwise the liquid amounts of may be unequal and the function of **Medi DC Bond** will be impaired.
 3. **Medi DC Bond** Liquid A and B should be mixed when in use. Do not use them separately as a single agent.
 5. Do not use the product in conjunction with other bonding agents.
 6. Use Light blocking
 7. **Medi DC Bond** will set to a gel if left under an operating light or natural light (sunlight from windows).
 8. Use the mixture of **Medi DC Bond** Liquid A and B as soon as possible after mixing. **BOND** contains volatile ethanol that as the solvent evaporates, the viscosity increases making it difficult to apply.
 9. Do not use **BOND** near an open flame.
 10. Remove any resin that remains on uncut enamel marginal discoloration would result from the overfilled resin tags. In such case that there is a possibility of resin spreading over uncut enamel and the removal seems difficult, apply an etching agent (e.g. **Medi Etch GEL**) to the enamel according to the manufacturer's instructions, let it remain for 10 seconds, wash with water, and then dry.
 11. Dry the entire adherent surface sufficiently using air from air syringe; adhesion effect could be impaired if the surface is not dried sufficiently.
 12. Do not use the product for the surface treatment of metal posts.
 13. 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.
 14. Check the lamp for service life and the dental curing light guide tip for contamination. It is advisable to check the dental curing light intensity using an appropriate light-evaluating device at appropriate intervals. Low light intensity causes poor adhesion.
 15. **The use of the product is restricted to a licensed dentist.**
 16. Do not use the product for any purposes other than those specified in INDICATIONS.
- ### 3. Storage precautions
1. The product must be used by the expiration date indicated on the package.
 2. The product must be refrigerated (2-8°C) when not in use, and should be brought to room temperature before using. After taking out of the refrigerator, the product must be left standing for more than 15 minutes, or until it comes to room temperature; otherwise bubbles will form in the liquid when dispensing or ooze after use .
 3. Keep away from extreme heat, direct sunlight or flame.
 4. Cap the **DC Bond** container immediately and completely after dispensing the liquid. If the container is left with the cap improperly replaced, the volatile substances will evaporate

and the function of **DC Bond** will be impaired. If the liquid does not flow easily from the nozzle it may have plugged up the nozzle valve. Do not try to dispense the liquid forcibly.

5. Wipe any **DC Bond** Liquid B off the nozzle of its container immediately after dispensing the liquid; otherwise white or pale yellow crystals will get deposited on the nozzle. If crystals get deposited on the nozzle, wipe them off cotton or gauze moistened with ethanol.

6. The product must be carefully stored and used by a licensed dental professional.

7. COMPONENTS

Please see the outside of the package for quantity.

1) DC Bond Liquid A

Principal ingredients:

- 2-Hydroxyethyl methacrylate (HEMA)
 - Bis-phenol A diglycidylmethacrylate (Bis-GMA)
 - 10-Methacryloyloxydecyl dihydrogen phosphate (MDP)
 - dl-Camphorquinone
 - Benzoyl peroxide
 - Colloidal silica
- ### 2) DC Bond Liquid B
- Principal ingredients:
- Water
 - Ethanol
- ### 3) Accessories
- Disposable brush tips
 - Brush tip handle
 - Mixing dish
 - Light blocking plate

8. CLINICAL PROCEDURES

A. Core build-ups using light-, dual-, or self-cure composite resin

A-1. Cleaning tooth structure

An adequately cleaned tooth surface assures maximum adhesive performance. Be sure the tooth surface is adequately cleaned.

A-2. Moisture control

In order to produce optimal results, avoid contamination of the treatment area from saliva or exudates. A rubber dam is recommended to keep the tooth clean and dry.

A-3. Tooth and root canal preparation

Remove existing restorations, decay and/or caries from the tooth and prepare root canal in the usual manner.

A-4. Pulp protection

Any actual or near pulp exposure could be covered with a hard setting calcium hydroxide material. There is no need for cement lining or basing. Do not use eugenol materials for pulp protection.

A-5. Post preparation

Select an appropriate post and make necessary adjustments and preparation to it.

A-6. Treatment of post surfaces (Either A-6a or A-6b)

A-6a. For metal posts

1. If the dental post is not already surface treated, sandblast it with alumina powder.
2. Apply a metal-adhesive primer (e.g. **Medi Gold Primer**) to the post surface with a brush, according to the manufacturer's instructions.

A-6b. For glass-fiber posts

1. Apply an etching agent (e.g. **Medi Etch Gel**) to the post surface according to the manufacturer's instructions and leave it in place for 5 seconds. Then wash the surface with water and dry.
2. Apply a silane-coupling agent (e.g. **Medi Ceramic Primer**) to the post surface according to the manufacturer's instructions.

A-7. Application of DC Bond

1. Dispense equal amounts of **Medi DC Bond** Liquid A and B into a well of Mixing dish and mix for more than 5 seconds immediately before application.

[CAUTION]

Use the mixture of **Medi DC Bond** Liquid A and B as soon as possible after mixing. The mixture must be covered with Light blocking plate and used within 90 seconds after mixing.

2. Apply mixed **Medi DC Bond** to the root canal and the cavity wall with a Disposable brush tip. Leave it in place for 20 seconds. Use caution not to allow saliva or exudates to contact the treated surfaces for at least 20 seconds.

[CAUTION]

DC Bond will set to a gel if left under an operating light. Move the lighting-spot out of the mouth or turn off the light to prevent the applied **Medi DC Bond** from exposure to strong light.

3. After conditioning the adherent surface for 20 seconds, dry the entire adherent surface sufficiently by blowing high-pressure, oil-free air for more than 5 seconds while spreading the bond layer thinly. Use a vacuum aspirator to prevent the **DC Bond** liquid from scattering. Remove excess **Medi DC Bond** with a paper point and once again dry the adherent surface sufficiently by blowing high-pressure, oil-free air.

[CAUTION]

- **Medi DC Bond** contains water and volatile ethanol. Dry the entire adherent surface sufficiently by blowing oil-free air; otherwise optimal adhesion will be impaired. Observe the drying method and treatment time to ensure optimum adhesion.
 - If the treated surface is contaminated, wash it with water, dry, or clean with alcohol, and treat with **Medi DC BOND** again.
4. Light-cure **Medi DC Bond** with a dental curing light (see table "Dental curing light") for the specified length of time shown in table "Light-curing time for dental curing lights".

Table: Dental curing light

Light Source	Wavelength range and light intensity	Light-curing time
Blue LED	Light intensity ²⁾ of more than 800 mW/cm ² in wavelength range from 400 - 515 nm	20 sec.

¹⁾ Peak of emission spectrum: 450 - 480 nm
²⁾ Evaluated according to ISO 10650-1.

A-8. Post cementation

1. Apply composite resin for core build-up (e.g. **Medi Core DC**) into the root canal according to the manufacturer's instructions.

2. Insert the post into the root canal and fix it in place.

[CAUTION]

- When using a dual-cure composite resin for core build-up, light-cure using the correct dental curing light, for the specified length of time, when fixing the post in place. Be sure to light-cure the margins of the tooth structure and the filling composite resin sufficiently to assure a good bond strength.
- When using a self-cure composite resin for core build-up, be sure to leave it for the specified length of time for complete hardening.
- The chemical polymerization of composite resin for core build-up (e.g. **Medi Core DC**) is accelerated on contact with a surface on which the **DC Bond** has been applied.

A-9. Core build-up

1. After cementing the post in the root canal, place the core build-up composite resin around the post.
2. Complete the curing process according to the manufacturer's instructions.

[CAUTION]

- When using a light-cure composite resin for core build-up, be sure to light-cure the material. Check the polymerization depth of the composite resin in the Instructions for Use and apply the

composite resin in a thickness that allows the light to reach the bond layer through the paste. After building up the composite resin, light-cure it from both the lingual and the labial sides to assure optimal bond strength.

- When using a dual-cure composite resin for core build-up, check the polymerization depth of the composite resin in the Instructions for Use and apply the composite resin in a thickness that allows the light to reach the bond layer through paste. Light-cure it from both the lingual and the labial sides to assure optimal bond strength. Considering the thickness, leave it for the specified length of time for additional self-curing after the light curing.

- When using a self-cure composite resin for core build-up, place the composite resin and leave it for the specified curing time.

A-10. Preparing an abutment tooth

After being sure that the core build-up composite resin is completely cured, finish the construction of the core in the usual manner.

B. Direct restorations using light- or self-cure composite resin / cavity sealing and treatment of exposed root surfaces

B-1. Cleaning tooth structure

An adequately cleaned cavity assures maximum adhesive performance.

Be sure the cavity is adequately cleaned.

B-2. Moisture control

In order to produce optimal results, avoid contamination of the treatment area from saliva or exudates. A rubber dam is recommended to keep the tooth clean and dry.

B-3. Cavity preparations

Remove any infected dentin using a caries detection material (e.g.

Medi Caries Detector) according to the manufacturer's instructions, and prepare the cavity in the usual manner.

B-4. Pulp protection

Any actual or near pulp exposure could be covered with a hard setting calcium hydroxide (e.g. **Medi Cal II**) material. There is no need for cement lining or basing. Do not use eugenol materials for pulp protection.

B-5. Acid etching uncut enamel

If there is a possibility of resin spreading over uncut enamel, apply an etching agent (e.g. **Medi Etch Gel**) to the uncut enamel according to the manufacturer's instructions, let it remain for 10 seconds, wash with water, and then dry.

B-6. Application of DC Bond

1. Dispense equal amounts of **Medi DC Bond** Liquid A and B into a well of Mixing dish and mix for more than 5 seconds immediately before application.

[CAUTION]

Use the mixture of **Medi DC Bond** Liquid A and B as soon as possible after mixing. The mixture must be covered with Light blocking plate and used within 90 seconds after mixing.

2. Apply mixed **Medi DC Bond** to the entire cavity wall with a Disposable brush tip. Leave it in place for 20 seconds. Use caution not to allow saliva or exudates to contact the treated surfaces for at least 20 seconds.

[CAUTION]

Medi DC Bond will set to a gel if left under an operating light. Move the lighting-spot out of the mouth or turn off the light to prevent the applied **Medi DC Bond** from being exposed to strong light.

3. After conditioning the adherent surface for 20 seconds, dry the entire adherent surface sufficiently by blowing high-pressure oil-free air for

more than 5 seconds while spreading the bond layer thinly. Use a vacuum aspirator to prevent the bond liquid from scattering.

[CAUTION]

- **DC Bond** contains water and volatile ethanol. Dry the entire adherent

surface sufficiently by blowing oil-free air; otherwise optimal adhesion will be impaired. Observe the drying method and treatment time to ensure optimal adhesion.

- If the treated surface is contaminated, wash it with water, dry, or clean with alcohol, and treat with **Medi DC Bond** again.

4. Light-cure **DC Bond** with a dental curing light (see table "Dental curing

light), for the specified length of time shown below

B-7. Follow either B-7a, B-7b or B-7c

B-7a. Direct restorations using light-cure composite resin

Apply composite resin (e.g. **Medi Galaxy Esthetic**, **Medi Opaque Posterior**) into the cavity, light-cure, finish and polish according to the manufacturer's instructions.

B-7b. Direct restorations using self-cure composite resin

Apply composite resin (e.g. **Medi Double Bond**) into the cavity, finish and polish according to the manufacturer's instructions.

B-7c. Cavity sealing and treatment of exposed root surfaces

Apply a thin coat of flowable light-cure composite resin (e.g. **Medi galaxy Flow**) to the tooth, and light-cure it according to the manufacturer's instructions. Remove unpolymerized resin with a cotton pledget moistened with alcohol.

C. Intraoral repairs of fractured crowns/bridges made of ceramics, hybrid ceramics or composite resin

C-1. Preparation of fractured surfaces

1. Facing material surface using a diamond point, remove a layer of the fractured surface and roughen the adherent surfaces. If necessary, place a bevel at the marginal area.

2. Exposed surface of metal frame and roughen the metal surface with a diamond point.

C-2. Acid etching of facing material and metal surfaces

Apply an etching agent (e.g. **Medi Etch Gel**) to the adherent surfaces of the facing material and the metal frame according to the manufacturer's instructions and leave it in place for 5 seconds. Then wash the surfaces with water and dry.

C-3. Treatment of exposed metal surface

Apply a metal-adhesive primer (e.g. **Medi Gold**) to the metal surface according to the manufacturer's instructions.

C-4. Silane treatment of facing material surface

Apply a silane-coupling agent (e.g. **Medi Ceramic Primer**) to the facing material surface with Disposable brush tip, according to the manufacturer's instructions.

C-5. Application of Medi DC Bond (When there is tooth surface as par of the adherent surface)

1. Dispense equal amounts of **Medi DC Bond** Liquid A and B into a well of Mixing dish and mix for more than 5 seconds immediately before application.

[CAUTION]

Use the mixture of **Medi DC Bond** Liquid A and B as soon as possible after mixing. The mixture must be covered with Light blocking plate and used within 90 seconds after mixing.

2. Apply the mixed **Medi DC Bond** to the adherent surface with a Disposable brush tip. Leave it in place for 20 seconds. Use caution not to allow saliva or exudates to contact the treated surfaces for at least 20 seconds.

[CAUTION]

Medi DC Bond will set to a gel if left under an operating light. Move the lighting-spot out of the mouth or turn off the light to prevent the applied **Medi DC Bond** from being exposed to strong light.

3. After conditioning the adherent surface for 20 seconds, dry the entire adherent surface sufficiently by blowing high-pressure oil-free air for more than 5 seconds while spreading the bond layer thinly. Use a vacuum aspirator to prevent the bond liquid from scattering.

[CAUTION]

- **Medi DC Bond** contains water and volatile ethanol. Dry the entire adherent surface sufficiently by blowing oil-free air; otherwise the adhesion effect will be impaired. Observe the drying method and treatment time to ensure optimal adhesion.

- If the treated surface is contaminated, wash it with water, dry, or clean with alcohol, and treat with **Medi DC Bond** again.

4. Light-cure **Medi DC Bond** with a dental curing light (see table "Dental curing light), for 20 sec.

C-6. Light-cure composite resin filling

Apply light-cure composite resin (e.g. **Medi white Pearl**), **Medi Opaque Posterior**) into the cavity, light-cure, finish and polish according to the manufacturer's instructions.

[NOTE]

If necessary, use opaque resin such as **Medi Opaque Plus** for the metal surface to prevent metal from shining through.

[CAUTION]

Federal (U.S.A.) law restricts this device to sale by or on the order of a licensed dentist.

[WARRANTY]

SwissMediTec GmbH. will replace any product that is proved to be defective. SwissMediTec GmbH. does not accept liability for any loss or damage, direct, consequential or special, arising out of the application or use of or the inability to use these products. Before using, the user shall determine the suitability of the products for the intended use and the user assumes all risk and liability whatsoever in connection therewith.

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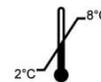
Keep away from sunlight



Refer to instruction manual



Keep Dry



Storage temperature range



Expiry date



Date of Manufacture



Manufactures address

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Swiss Quality

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