

NANOFIL®

(B-10)

Dental Bonding Agent

Instructions for Use



CE 0197

Product Description

NANOFIL® dental bonding agent B-10 is a light-curing total-etch adhesive belongs to polymer-based luting material. It is used in combination with light-curing composite or compomer filling materials, cements, and core build-up materials. The adhesive can be polymerized using halogen, LED, curing lights. NANOFIL® B-10 is available in bottles for free dosing.

Specification

5ml/bottle

Classification

Type 2, Class 2, Group 1 according to ISO 4049:2019.

Composition

NANOFIL® dental bonding agent B-10 mainly contains: PMGDMD, HEMA, light cure initiator, acetone.

Indications

- All classes of fillings with light-curing composite
- Core build-ups made of light-curing composite
- Intraoral repair of existing composite
- Cementation of veneers and adhesive cementation of light-curing composite

Contraindications

Do not use in case of known hypersensitivity to bonding agent. Do not use for bonding of self-curing and dual-curing composite.

Side Effect

This product or one of its components may in particular case causes hypersensitive reactions.

Precautionary Measures

For Patients

This product contains certain substances that may cause allergic reactions through skin contact. Avoid using this product for patients who are allergic to acrylates.

If there is prolonged contact with oral tissue, please rinse with plenty of water.

If an allergic reaction occurs, please seek medical care as needed.

For Operators

This product contains substances that may cause an allergic reaction by limbs and eye contact. To reduce the risk of allergic response, use of protective gloves, goggles, and a no-touch technique is recommended.

If skin contact occurs, wash skin with soap and water.

If hands contact occurs, wash hands immediately with soap and water and then re-glove.

If eyes contact and allergic reaction occurs, seek medical attention as soon as possible.

Instruction for Use

1. Clean:

Rubber dam is recommended to make isolation.

1.1 For all classes of cavity, enamel/dentin surface should be cleaned with pumice and water to gently remove surface stains. Dry the cavity with air free of oil or by blotting with cotton pellets.

1.2 For core build up whole surface should be clean and dry.

2. Etching:

Use etching agent gel for etching treatment according to the instruction manual. For example, use NANOFIL® Etchant Gel AT-37 to etch tooth enamel for 20-30 seconds and dentin for 15 seconds.

Caution: For hypersensitive to Etching agent, etching should be avoided.

3. Dosing from the bottle:

Unscrew the cap of the bottle. Dose the necessary amount of NANOFIL® B-10 to target surface and protect the liquid from light. Close the cap tightly after dosing. If necessary, disinfect the bottle in accordance with local hygiene regulations.

Caution: Any contact with blood, saliva, or sulcus fluid will cause contamination.

4. Smear the adhesive:

Apply the adhesive with the little brush or other hygiene smear tools on all surfaces of the cavity and rub it in for 30 sec. Subsequently blow a gentle stream of air over the liquid for approx. 5 sec until the film no longer moves, indicating complete evaporation of the solvent. Cure the adhesive with a commonly used curing light for 20 sec. Depending on the indication, continue to work with the desired composite or compomer material as indicated in the pertinent instructions for use.

Caution: Avoid contact of the adhesive with mucosal tissue.

Storage Condition

1. This product is designed to be used at room temperature (2-25) °C/ (36-77) °F.

2. Do not expose materials to intense light.

3. Do not store materials in proximity to eugenol containing products.

4. Disinfect the products using an intermediate level disinfection process.

Expiration Date and Batch Number

See note on bottle/packageing.

Warranty

2 years.

Etchant Gel

Instructions for Use



CE 0197

Product description

NANOFIL® Etchant Gel is an etching agent based on ortho phosphoric acid. It is used to etch enamel and condition dentine in the context of adhesive filling therapy.

Specification

AT-20, AT-33, AT-35, AT-37

Composition

NANOFIL® Etchant Gel AT-37 (AT-20, AT-33, AT-35) contains 37% (20%, 33%, 35%) phosphoric acid. The product further contains thickening agents, pigments and water.

Indications

Enamel etching and enamel/dentine etching in the context of the total etch technique prior to the adhesive bonding of:

- Composite and compomer restorations
- Indirect restorations (e.g. inlays, crowns, bridges, veneers)
- Sealants

Contraindications

- Application to dentine close to the pulp (dentin layer less than 1 mm in thickness)
- Do not use in case of known hypersensitivity to Etchant Gel.

Side effects

This product or one of its components may in particular cases cause hypersensitive reactions.

Interactions

Liner and base materials, such as calcium hydroxide, may be dissolved by the acid, depending on their type and composition.

Warnings/Precautions

NANOFIL® Etchant Gel AT-20 contains 20% phosphoric acid and can cause irritation, Etchant Gel AT-33, AT-35, AT-37 contains 33%, 35%, 37% phosphoric acid respectively and can cause chemical burns.

Etchant Gel may irritate eyes. Avoid contact with gingiva, skin, eyes or neighboring teeth. In case of contact with oral mucosa, rinse thoroughly with plenty of water. If swallowed, thoroughly rinse mouth with water and then drink plenty of water. Consult a physician. In case of contact with skin, thoroughly rinse with soap and water. In the event of contact with eyes, rinse thoroughly with water and seek medical advice. Wear suitable protective gloves. Avoid skin contact. Wear protective clothing. Wear safety glasses/face protection.

Immediately remove clothing contaminated with NANOFIL® Etchant Gel.

- Only to be used by dentists and for its intended use.
- Store out of reach of children.
- Only used before the expired date.

Application

Prior to treatment, carefully clean tooth with fluoride-free polishing paste. The use of rubber dam is recommended.

Disposable brush and syringe needle should be used when we apply the Etchant Gel.

1. Starting from the beveled enamel areas, apply NANOFIL® Etchant Gel to the entire cavity surface, including the dentine. Ensure that the enamel is etched for at least 20 sec and no more than 30 sec, and that the dentine is conditioned for at least 15 sec and no more than 20 sec. When using AT-33, AT-35, AT-37, pay special attention to complying with the dwell time on the dentine. Reducing the time less than 15 sec in these areas is permissible to avoid over etching. If desired, only apply Etchant Gel to the enamel and let set for a maximum of 30 sec. Etch unprepared enamel, e.g. in case of fissure sealing, for at least 30 sec and no more than 60 sec. In case of fluoridated enamel, etching for no more than 60 sec may also be required.

Caution: In case of deep cavities, we recommend covering the dentine near the pulp with a calcium hydroxide preparation and a base (e.g. glass ionomer cement) prior to etching.

2. Use a water sprayer to completely rinse off Etchant Gel for 20 sec. The cavity must be completely free of any remnants.

3. Dry the cavity with oil-free air (do not dry out dentine!). The etched enamel surface should appear chalky white. In case of contamination of the tooth surface (e.g. with saliva), the etching must be repeated (for a maximum of 10 sec dwell time).

4. Perform further treatment with adhesive and composite in accordance with manufacturer directions.

5. In case of cross-infection, after used disposable items should be discarded in container designed for medical waste disposal.

6. Remaining etching gel may be discharged with wastewater if highly diluted with water or neutralized.

Storage conditions

Store at temperatures below 25°C (77°F).

Expiration date and batch number

See note on syringe/package.

Warranty

3 years

Package specification

2.5ml/package, 5ml/package

Specific content see the note attached in the package.

Dental Filling Resin

Instructions for Use



Product Description

NANOFIL® dental filling resin restorative material is a visible-light activated, radiopaque, restorative composite. It is designed for use in both anterior and posterior restorations. Restorative material contains Bis-GMA and TEGDMA resins and barium glass. The restorative is available in a variety of shades. It is packaged in traditional syringes and cartridge capsules.

Specification

4.5g/Syringe, 2g/Syringe, Cartridge (0.3g)

Shades

A1,A2,A3,A3.5,A4,B1,B2,B3,B4,C1,C2,C3,C4,
D2,D3,D4,M1,M2,M3

Composition

NANOFIL® dental filling resin contains Bis-GMA and TEGDMA resins and barium glass.

Indications

Anterior and posterior direct and indirect restoration

Contraindications

Hypersensitive to acrylic monomer

Side Effects

This product or one of its components may in particular cases cause hypersensitive reactions.

Interactions

Phenolics and other substances (e.g. zinc oxide eugenol) may inhibit the curing process.

Warnings/Precautions

NANOFIL® dental filling resin may irritate eyes. Avoid contact with gingiva, skin, eyes or neighboring teeth. In case of contact with oral mucosa, rinse thoroughly with plenty of water. If swallowed, thoroughly rinse mouth with water and then drink plenty of water. Consult a physician. In case of contact with skin, thoroughly rinse with soap and water. In the event of contact with eyes, rinse thoroughly with water and seek medical advice. Wear suitable protective gloves. Avoid skin contact. Wear protective clothing. Wear safety glasses/face protection.

•Only to be used by dentists and for its intended use.

•Store out of reach of children.

•Only used before the expired date.

Instruction for use

Preparation

1. Prophylaxis

Teeth should be cleaned with pumice and water to remove surface stains.

2. Shade Selection

Before isolating the tooth, select the appropriate shade(s) of restorative material. Shade selection accuracy according to VITAPAN criteria.

3. Isolation

A rubber dam is the preferred method of isolation. Cotton rolls plus an evacuator can also be used.

Direct Restoration

1. Cavity Preparation

1.1 Anterior Restorations Use Conventional Cavity

Preparations for all class III, IV and class V restorations.

1.2 Posterior Restorations

Prepare the cavity. Line and point angles should be rounded. No residual amalgam or other base material should be left in the internal form of the preparation that would interfere with light transmission and therefore, the hardening of the restorative material.

2. Pulp Protection

If a pulp exposure has occurred and if the situation warrants a direct pulp capping procedure, use a minimum amount of calcium hydroxide on the exposure.

3. Placement of Matrix

3.1 Anterior Restorations

Mylar strips and crown forms may be used to minimize the amount of material used.

3.2 Posterior Restorations

To establish the better contour, dead-soft metal, Mylar, or other forming device are advised.

4. Adhesive System

Follow the manufacturer's instructions, applying the adhesive.

5. Dispensing the Composite

Follow the directions corresponding to the dispensing system chosen. Dispense the necessary amount of restorative material from the syringe onto the mix pad by turning the handle slowly in a clockwise manner. Then fill the material into the cavity.

6. Curing

NANOFIL® dental filling resin is intended to be cured by exposure to a halogen or LED light with a minimum intensity of 400 mW/cm². Cure each increment by exposing its entire surface to a high intensity visible light source, hold the light as close to the restorative as possible during light exposure. The recommended exposure time and maximum increment thickness for each shade is shown below.

Shades	Thickness	Exposure Time
A1, A2, A3,A3.5, B1, B2,B3, C1, C2, D2, D3 M1, M2,M3	3.0mm	40 sec
A4, B4, C3, C4, D4	2.0mm	40 sec

7. Polishing

Polish with finishing and polishing system.

Indirect Restoration

1. Dental Operatory Procedure

1.1 Shade Selection

Choose the appropriate shade(s) NANOFIL® Dental filling resin prior to isolation.

1.2 Preparation

Prepare the tooth.

1.3 Impression

After preparation is complete, make an impression of the prepared tooth by following the manufacturer's instructions of the impression material.

2. Laboratory Procedure

2.1 Impression Registration

Pour the impression of the preparation with die stone. Separate the cast from the impression after 45 to 60 minutes. Make a cast die according to a typical crown and bridge procedure.

2.2 Make the Prosthesis

Section out the preparation with a laboratory saw and trim away excess and dispense the NANOFIL® dental filling resin into the preparation then light cure the resin composite, after curing, trim the prosthesis and demould the prosthesis.

3. Dental Operatory Procedure

3.1 Roughen the interior surfaces of the indirect restoration.

3.2 Clean the prosthesis in a soap solution in an ultrasonic bath and rinse thoroughly.

3.3 Cement the prosthesis using a resin cement system.

Caution

In case of deep cavities, we recommend covering the dentine near the pulp with a calcium hydroxide preparation and a base (e.g. glass ionomer cement) prior to etching.

Do not store materials in proximity to eugenol containing products. Disinfect the products using an intermediate level disinfection process.

Storage conditions

Store at temperatures of 2~25°C (36~77°F).

Expiration Date and Batch Number

See note on syringe/packaging.

Warranty

3 years



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