

EN

COSMEDENT® www.cosmedent.com | 800.621.6729
Renamel® NANO+plus | LIGHT-CURED NANOFILL COMPOSITE

INSTRUCTIONS FOR USE

GENERAL CHARACTERISTICS

Renamel NANO+plus is Cosmedent's universal, light-cured, radio-paque, high strength, esthetic nanohybrid composite restorative material that is compatible with the full line of **Renamel** products. **Renamel NANO+plus** mimics the translucency of natural tooth structure and is recommended as a universal composite for those dentists who only want to use a single composite.

DESCRIPTION

Renamel NANO+plus is a light-cured, nanofilled, radiopaque, highly polishable dental filling material referred to as EN ISO 4049 (Type 1/Class 2 / Group 1). **Renamel NANO+plus** cures with an LED or Halogen light at wavelength range of 400 – 500 nm. **Renamel NANO+plus** has a compressive strength > 300 MPa, flexural strength > 90 MPa, radiopacity > 1.0 mm and a depth of cure > 1.5mm.

COMPOSITION

Renamel NANO+plus contains submicron particles combined with more conventional filler technology. The larger particles in **Renamel NANO+plus** provide similar strength properties to microhybrid materials while exhibiting higher polishability. **Renamel NANO+plus** contains Bis-EMA, UDMA, TEGDMA and Bis-GMA (22%). The fillers contain barium glass, silicon dioxide and acrylic polymer (78% by weight and 60% by volume). Initiators, stabilizers and pigments are additional ingredients (< 1%). The particle size of the fillers range from 0.04 – 3 micron with a mean particle size of 0.7 microns.

ESTHETICS

Renamel NANO+plus is the most esthetic universal composite available. But it is important to remember that nanofill materials will not hold their polish as long as microfill composites, so for ultimate esthetics you should overlay **Renamel NANO+plus** with **Renamel Microfill** (the enamel layer). **Renamel NANO+plus** is color matched to the VITA® shade guide and all **Renamel** composites and opacifiers.

HANDLING PROPERTIES

Renamel NANO+plus has excellent handling properties with its non-stick, no slump consistency. **Renamel NANO+plus** stays where you place it and is a great choice for Class IV restorations. Because of **Renamel NANO+plus**'s lifelike opacious translucency, it has a very natural appearance and will polish to a high shine when the proper polishing technique is followed.

INDICATIONS FOR USE

- Class V dental restorations
- Direct veneering of anterior teeth
- Splinting
- Repair of composite or ceramic restorations

DISPENSING COMPOSITE MATERIAL

Syringe delivery:
 - Extrude composite onto a mixing pad by turning the handle slowly in a clockwise manner. Slice an increment of proper size with a sterile instrument onto a mixing pad.
 - Immediately replace syringe cap to prevent polymerization. If the extruded material is not used right away, cover the composite with a light protecting box such as our **ResinKeeper™**.

Unit Dose Delivery:

- Insert unit dose into dispensing gun and dispense composite material. Dispose of unit dose after use.

ANTERIOR PLACEMENT DIRECTIONS

Prior to the application of **Renamel NANO+plus**, the use of **Pink Opaque™** (from Cosmedent) may be necessary to achieve excessive color blockout such as tetracycline stains, the unsightly non-vital tooth and teeth with metal posts and cores.

① Prepare, etch and dry according to manufacturer's instructions.

② Place dental adhesive of choice, such as **Cosmedent's Complete™**, and **polymerize**.

③ **Renamel NANO+plus** should be placed in a light protecting box, such as the **ResinKeeper™**, to prevent pre-polymerization by ambient light. Since composite ends into a ball, a cylinder or an elliptical shape (convenience form) as needed.

④ Place with a clean metal instrument onto the area to be restored and shaped. **Cosmedent's BA & BAL (long and short bladed)** and **G-3** are excellent instruments for placement.

Note: For instrumentation, titanium-coated composite instruments are desired because they will prevent composite material from sticking to the instrument.

⑤ If resin still sticks to the instrument, the instrument may be scratched or dirty. If your room is excessively warm and some stickiness occurs, simply wipe the instrument with a light alcohol swab and this will reduce stickiness completely.

⑥ Take your time and sculpt carefully. Slightly overcontour every restoration, except in the interproximal areas. Sculpt exactly to contour in these areas and it will greatly aid in developing the final contour of your restoration, and shorten your finishing and polishing time. **Cosmedent's IPC** instruments are excellent for interproximal sculpting.

⑦ If placing an incisal shade, the use of a titanium-coated instrument, such as **Cosmedent's Multi-Purpose** instrument, will help you create incisal lobes and grooves in your body composite to make room for the application of your incisal shade.

⑧ Polymerize each surface for 20 – 40 seconds (Halogen or LED Lamp) and final cure each restoration on all surfaces for 60 seconds. Do not try to cure to depths over 2 mm.

Note: Dentists tend to under-cure composites. You will get best results if you slightly over-cure.

Opaque if necessary to increase the value of your restoration and polymerize. For predictable results, the corresponding opacifier should be the same shade as your **Renamel NANO+plus** composite.

⑨ If ultimate esthetics are desired, overlay with **Renamel Microfill**. When using **Renamel NANO+plus** as a universal composite, you will get really good esthetics and a very nice polish. However, the polish on **Renamel NANO+plus** will not last as long as one of a microfill.

⑩ Finishing should be done with a combination of polishing materials such as diamonds, carbide burs, aluminum oxide discs (**Mini FlexiDiscs** from Cosmedent), finishing cups and points, (**FlexiCups**) and (**FlexiPoints**) from Cosmedent) and polishing paste (**Enamelize** from Cosmedent).

COLOR MATCHING
 Is this anything more difficult than matching a tooth shade against an existing dentition? The **Renamel Restorative System™** is designed to take the guess work out of shade selection. It recognizes that there are different zones of color and translucency. It understands that color selection should be about achieving the correct enamel shade with predictability. **Cosmedent's Renamel Restorative System** will help you easily achieve consistently reliable results when selecting a shade.

Color matching is a difficult science, and many people have trouble with color selection. What are the problems?

- Many materials on the market do not match their shade guides.

- It is often difficult for an individual to see shade differences.

- The color, opacity, translucency and polishability of many materials do not accurately simulate the tooth surface.

- Materials often have a refractive and reflective index that is dissimilar to that of the enamel surface.

- Many materials do not have long-term color stability which can result in large color changes over time.

Cosmedent has consistently developed reliable and color stable materials that accurately match each other and the **Classic VITA® Shade Guide. Renamel composites have been matched to VITA® shades more accurately than any other material in the marketplace. **Renamel NANO+plus** comes in 16 of the most useful composite shades, including the unique half shade of A3.5, and bleach shade S83.**

Renamel NANO+plus also contains two vividly translucent incisal shades: **Light Incisal** and **Medium Incisal**.

SHADE SELECTION

When selecting a shade, one should remember that teeth are usually polychromatic, having three zones: a translucent darker incisal, a lighter central body portion and a darker cervical area.

③ After preparation, cleanse, etch, wash, dry and place bonding adhesive of choice, such as **Cosmedent's Complete** for excellent bond strengths and marginal seal.

④ Place **Renamel NANO+plus**, adding enough composite to cover the entire base of the preparation to a depth about 1 mm and not exceeding 2 mm and polymerize each surface for 20 – 40 seconds (Halogen or LED Light).

Assessing shade on a clean, moist tooth using magnification will help you to easily identify these areas. The body shades in the **Renamel Restorative System** correspond to the central body zone of the tooth surface.

⑤ Continue to build-up in incremental layers and slightly over-contour the occlusal. The use of Cosmedent's condensing and contouring instruments and round ball burnishers will work well to gently contour and move the material to where you want it. Do not over-manipulate material because this could cause voids and later pitting of the finished restoration.

⑥ Final cure each restoration on all surfaces for 60 seconds.

⑦ Finishing and polishing should be done with a combination of polishing materials such as diamonds, carbide burs, aluminum oxide discs (**Mini FlexiDiscs** from Cosmedent), finishing cups and points, (**FlexiCups**) and (**FlexiPoints**) from Cosmedent) and polishing paste (**Enamelize** from Cosmedent).

POSTERIOR PLACEMENT CLASS II
 Insert unit dose into dispensing gun and dispense composite material. Dispose of unit dose after use.

ANTERIOR PLACEMENT DIRECTIONS
 Prior to the application of **Renamel NANO+plus**, the use of **Pink Opaque™** (from Cosmedent) may be necessary to achieve excessive color blockout such as tetracycline stains, the unsightly non-vital tooth and teeth with metal posts and cores.

① Prepare, etch and dry according to manufacturer's instructions.

② Place dental adhesive of choice, such as **Cosmedent's Complete™**, and **polymerize**.

③ **Renamel NANO+plus** should be placed in a light protecting box, such as the **ResinKeeper™**, to prevent pre-polymerization by ambient light. Since composite ends into a ball, a cylinder or an elliptical shape (convenience form) as needed.

④ Place with a clean metal instrument onto the area to be restored and shaped. **Cosmedent's BA & BAL (long and short bladed)** and **G-3** are excellent instruments for placement.

Note: For instrumentation, titanium-coated composite instruments are desired because they will prevent composite material from sticking to the instrument.

⑤ If resin still sticks to the instrument, the instrument may be scratched or dirty. If your room is excessively warm and some stickiness occurs, simply wipe the instrument with a light alcohol swab and this will reduce stickiness completely.

⑥ Take your time and sculpt carefully. Slightly overcontour every restoration, except in the interproximal areas. Sculpt exactly to contour in these areas and it will greatly aid in developing the final contour of your restoration, and shorten your finishing and polishing time. **Cosmedent's IPC** instruments are excellent for interproximal sculpting.

⑦ If placing an incisal shade, the use of a titanium-coated instrument, such as **Cosmedent's Multi-Purpose** instrument, will help you create incisal lobes and grooves in your body composite to make room for the application of your incisal shade.

⑧ Polymerize each surface for 20 – 40 seconds (Halogen or LED Lamp) and final cure each restoration on all surfaces for 60 seconds. Do not try to cure to depths over 2 mm.

⑨ Apply and sculpt further material as needed, and cure. The rule of thumb is not to exceed 2 mm of material at a time. You should polymerize each incremental layer for 20 – 40 seconds. This will give maximal strength and hardness to the final restoration. Polymerize the final layer for 60 seconds.

Note: To prevent the "Cusp-flexion" in large restorations, it might be desirable to develop one cusp at a time.

⑩ Finishing and polishing should be done with a combination of polishing materials such as diamonds, carbide burs, aluminum oxide discs (**Mini FlexiDiscs** from Cosmedent), finishing cups and points, (**FlexiCups**) and (**FlexiPoints**) from Cosmedent) and polishing paste (**Enamelize** from Cosmedent).

COLOR MATCHING
 Is this anything more difficult than matching a tooth shade against an existing dentition? The **Renamel Restorative System™** is designed to take the guess work out of shade selection. It recognizes that there are different zones of color and translucency. It understands that color selection should be about achieving the correct enamel shade with predictability. **Cosmedent's Renamel Restorative System** will help you easily achieve consistently reliable results when selecting a shade.

DISPOSAL INSTRUCTIONS

Dispose of contents/container in accordance with local regulation.

CONTRAINDICATIONS

Renamel NANO+plus is contraindicated if patient is known to be allergic to any of the ingredients of **Renamel NANO+plus**.

SIDE EFFECTS

Can cause irritation in sensitive patients.

INTERACTIONS

Do not use **Renamel NANO+plus** in combination with eugenol containing materials.

COMPOSITION

Renamel NANO+plus contains the following materials: **Urethane-modified Bis-GMA**, **UDMA**, **TEGDMA** and **Bis-GMA** (22%).

The fillers contain barium glass, silicon dioxide and acrylic polymer (78% by weight and 60% by volume). Initiators, stabilizers and pigments are additional ingredients (< 1%). The particle size of the fillers range from 0.04 – 3 micron with a mean particle size of 0.7 microns.

ESTHETICS

Renamel NANO+plus is the most esthetic universal composite available. But it is important to remember that nanofill materials will not hold their polish as long as microfill composites, so for ultimate esthetics you should overlay **Renamel NANO+plus** with **Renamel Microfill** (the enamel layer). **Renamel NANO+plus** is color matched to the VITA® shade guide and all **Renamel** composites and opacifiers.

HANDLING PROPERTIES

Renamel NANO+plus has excellent handling properties with its non-stick, no slump consistency. **Renamel NANO+plus** stays where you place it and is a great choice for Class IV restorations. Because of **Renamel NANO+plus**'s lifelike opacious translucency, it has a very natural appearance and will polish to a high shine when the proper polishing technique is followed.

INDICATIONS FOR USE

- Class V dental restorations
- Direct veneering of anterior teeth
- Splinting
- Repair of composite or ceramic restorations

DISPENSING COMPOSITE MATERIAL

Syringe delivery:
 - Extrude composite onto a mixing pad by turning the handle slowly in a clockwise manner. Slice an increment of proper size with a sterile instrument onto a mixing pad.

- Immediately replace syringe cap to prevent polymerization. If the extruded material is not used right away, cover the composite with a light protecting box such as our **ResinKeeper™**.

① Prepare the cavity according to general standards in composite filling therapy.

② **Recommendation for deep cavities:** Cover very deep areas close to the pulp with a calcium hydroxide material and subsequently use a pressure-resistant cement (e.g. glass ionomer cement). Do not cover other cavity walls, since they can be used to support the bond with an enamel / dentin adhesive.

③ Use of a clean, dry gloved finger is very effective in rapidly forming the desired surface prior to your sculpting techniques.

④ The use of titanium-coated instruments is desired to prevent composite pull-back.

⑤ Following cavity preparation, cleanse, etch, wash and dry and place a dental adhesive of choice, such as **Cosmedent's Ultra-Thin Pre-Contoured Matrix Bands**, or a **G-3** for application and general shaping of the material, and the **IPCP** or **ICL** (long or short blade) for final refinements.

⑥ After placement, wedge thoroughly and make sure the gingival seal is tight. Often, it is necessary to wedge from both the buccal and lingual to obtain complete closure.

⑦ **Cosmedent's Posterior titanium-coated instruments** are excellent for placing and developing contour in posterior restorations.

⑧ Burnish the band using a round ball burner and the convex side of a spoon excavator in order to create a contact area and not just a contact point. Use heavy pressure and observe the burnished area closely. You should easily be able to see the contact area you have created.

⑨ Rinse the preparation and dry thoroughly and apply base if so desired. Then, etch and apply the dental adhesive of your choice. **Cosmedent's Complete** dental adhesive system is an excellent choice.

⑩ Make sure your patient removes all makeup prior to treatment.

⑪ When applying composite place convenience form in one piece, then sculpt off excess. This is much easier than placing too little and then adding more.

⑫ Apply a flowable cavity liner such as **Cosmedent's Hyper Radiopaque De-Mark** at the gingival seat of posterior restorations to differentiate your restoration from tooth structure. Using a nonstick composite placement instrument apply a small amount of material and gently tap to place with a small round ball burner and cover the gingival seat only. Light-cure for 40 – 60 seconds.

⑬ Take your time and sculpt carefully. Slightly overcontour every restoration, except in the interproximal areas

