

# Oxford Zircore NANO



## Directions for Use

### Premium Dual Cure Core Build-up and Post Cementing Composite

**Oxford Zircore NANO** is a dual cure high radiopaque flowable composite material with nano-silica, nano zirconia and nano-calcium fluoride particles for core build-up and cementation of posts. Due to its excellent mechanical properties final crown preparation can be carried out more precise. Delivered in 1:1 AUTOMIX-cartridges Oxford Zircore NANO can be easily dispensed and applied directly. Oxford Zircore NANO exhibits a short setting time without high heat generation and shows excellent thixotropic behavior. The dual cure properties enable the dentist, also to carry out cementations and core build-ups in cases where light cure cannot be guaranteed to be sufficient.

Oxford Zircore NANO meets the requirements of **ISO 4049**.

### Indications of Oxford Zircore NANO

- post cementation
- core build-up

### Contraindications

The placement of Oxford Zircore NANO is contraindicated

- If a dry working area or the recommended application technique are not possible
- If the patient is known to be allergic to any of the ingredients in Oxford Zircore NANO.

### Side effects

Side effects are not known to date. In singular cases, Oxford Zircore NANO may cause a sensitizing reaction in patients with a hypersensitivity to any of the ingredients. In these cases, the material should not be used.

Irritations resulting from direct contact with the pulp cannot be ruled out. Therefore protect pulp in deep cavities with a thin layer of calcium hydroxide material.

### Incompatibility with Other Materials

Do not use in combination with substances containing eugenol because eugenol inhibits the polymerization of the composite. Neither store the composite material in proximity of eugenol containing products, nor let the composite allow coming into contact with materials containing eugenol.

### Preparing of the AUTOMIX-cartridge

First Scientific Dental Materials GmbH only recommends for Oxford Zircore NANO the use of mixing cannulas type Oxford Mix TIP(O) yellow and Oxford IntraOral TIP yellow.

The turn cap of the cartridge is taken off and thrown away (**do not use it again!**). Bleed the AUTOMIX-cartridge before applying the mixing cannula. Gently press the plunger until both components (base and catalyst) begin to flow out evenly. Attach a 1:1 mixing

cannula. Make sure that the guidance of the AUTOMIX-cartridge is aligned with that of the mixing cannula and turn the cannula 90° clockwise until it locks in position. The application gun loaded with the prepared cartridge and is ready for application.

#### Note:

The initial extrusion from the mixing cannula (about the size of a pea) should be discarded. Then the following mix will be perfect. This must be done for each new mix.

Store used AUTOMIX-cartridge with fixed used mixing cannula in the dark.

**The working time (23°C / 74°F) of Oxford Zircore NANO in the self cure mode is 1:30 minutes from start of mixing.**

## 1. Post Cementation

### 1.1. Isolation

Use of a rubber dam to isolate the tooth is strongly recommended.

### 1.2. Root Canal Preparation

Refer to directions of the selected post manufacturer.

Remove all existing old restorations and decay from the tooth. Prepare and clean the root canal with e.g. sodium hypochlorite solution, rinse and remove excess solution from the canal with a soft paper tip.

Apply a dual cure bonding agent to the clean surfaces.

The self-etching bonding agent Oxford Bond SE Dual is recommended.

One drop of Oxford Bond SE Dual Part A and one drop of Oxford Bond SE Dual Part B were combined in a mixing pallet and mixed for 5-10 seconds.

#### Note:

Do not interchange lids of the bottles, because this can lead to a cross-contamination of the liquids.

Apply the homogeneous mixture generously with a microbrush onto the slightly wet root canal walls for 15 seconds with agitation. Repeat procedure 1 – 2 times. All the dentine surfaces must kept wet with the primer over the specified time

Remove excess Oxford Bond SE Dual with dry paper points. Dry the root canal cautiously with oil free air for 15 seconds to remove all volatile components and to disperse the adhesive to an even layer. Light cure all areas that are available for a dental curing unit for 20 seconds.

**For a maximal adhesion it is strongly recommended to use the light cure mode.**

If light cure is absolutely impossible, the adhesive will also cure in the autocure mode. After application of the adhesive air thin to **remove all volatile components**. There must remain a sticky layer.

### 1.3. Post Cementation

Prepare the selected post according to manufacturer directions.

Oxford Zircore NANO is applied into the prepared root canal and onto the post. Seat the post careful into the canal and maintain firm pressure until the post is seated.

Oxford Zircore NANO self-cures within **3:30 minutes**. For post stabilization light cure the coronal part of the cemented post for **20 seconds**.

As soon as the Oxford Zircore NANO has set proceed with the core build-up procedure.

## **2. Core Build-up**

### **2.1 Isolation**

Use of a rubber dam to isolate the tooth is strongly recommended.

### **2.2. Cavity Preparation**

Remove all existing old restorations and decay from the tooth. If necessary place any pins or posts. Refer to directions of the selected post manufacturer.

### **2.3. Pulp Protection**

Cavity floor of deep excavations should be covered with a thin layer of calcium hydroxide material.

### **2.4. Application of a Bonding Agent**

Apply a dual cure bonding agent to the clean surfaces.

The self-etching bonding agent Oxford Bond SE Dual is recommended.

One drop of Oxford Bond SE Dual Part A and one drop of Oxford Bond SE Dual Part B were combined in a mixing pallet and mixed for 5-10 seconds.

**Note:**

Do not interchange lids of the bottles, because this can lead to a cross-contamination of the liquids.

Apply the homogeneous mixture generously with a microbrush onto the slightly wet enamel- and dentin surfaces for 30 seconds with agitation. The material should build a homogeneous layer. Air thin for 10 seconds to remove the volatile components and to disperse the adhesive. Then light cure with a dental halogen light unit for 20 seconds and place the restorative material.

**For a maximal adhesion it is strongly recommended to use the light cure mode.**

If light cure is absolutely impossible, the adhesive will also cure in the autocure mode. After application of the adhesive air thin to **remove all volatile components**. There must remain a sticky layer.

**Note:**

It is essential that the primed dentine and enamel surfaces are dry and contaminant free for the application of Oxford Zircore NANO.

### **2.5. Application**

Place the mixing cannula directly into the preparation and press out the paste.

Oxford Zircore NANO is automatically mixed when dispensed with slight and even pressure. Filling should occur from bottom upwards to prevent voids. To facilitate placement of Oxford Zircore NANO place a matrix band around the prepared tooth.

Oxford Zircore NANO may be contoured by using a composite instrument. A flat-ended interproximal carver is recommended.

Place Oxford Zircore NANO directly into the preparation and allow the system to self cure for **3:30 minutes**. After that the material should be light-cured (**40 seconds**). With this technique an optimum of physical properties will be obtained.

An explorer can be used to test that the Oxford Zircore NANO has completely set. Remove the matrix not earlier than the material has set.

Final crown preparation on the Oxford Zircore NANO can be carried out by using crown preparation burs.

## **Warnings**

- Non polymerized materials may have an irritating effect and may lead to a sensitizing reaction against methacrylates.
- Avoid contact with skin, mucous membrane and eyes.
- If the material comes into contact with skin, immediately wash with water and soap. If the material comes into contact with eyes, immediately rinse with copious amounts of water and seek medical advice if required.
- Commercial medical gloves do not protect against the sensitizing effect of methacrylates.

## **Storage**

Do not store above 20 °C (68 °F). Store unopened material in the refrigerator.

Opened cartridges have to be used up within 3 months.

Do not use after expiration date (see expiration date on label/package)

## **Warranty**

First Scientific Dental Materials GmbH warrants this product will be free from defects in material and manufacture. First Scientific Dental Materials makes no other warranties including any implied warranty of merchantability or fitness for a particular purpose. User is responsible for determining the suitability of the product for user's application. If this product is defective within the warranty period, your exclusively remedy and First Scientific Dental Materials' sole obligation shall be repair or replacement of the First Scientific Dental Materials product.

## **Limitation of Liability**

Except where prohibited by law, First Scientific Dental Materials GmbH will not be liable for any loss or damage arising from this product, whether direct, indirect, special, incidental or consequential, regardless of the theory asserted, including warranty, contract, negligence or strict liability.

**Keep away from children!**

**For dental use only!**

## **Caution:**

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



**Manufacturer:**

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