

# NFC<sup>+</sup>

Instructions for Use

CE 0123



**NFC<sup>+</sup>**

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# Instructions for Use for Candolor NFC+ teeth

## Introduction

The NFC+ tooth lines have natural-looking esthetics and very good wear resistance. The composition of the NFC+ material is perceptibly different from conventional systems based on PMMA. However, for maximum performance it is essential to use the product correctly. The Instructions for Use include a detailed description of the indications and contraindications and also instructions for processing the teeth. The following instructions are particularly important for the manufacture of restorations in combination with implants.

## Indication

The NFC+ tooth lines have been developed specially for implant prosthetics, in addition to their use in partial or full prosthetics.

Use of the NFC+ material is restricted with constructions that are solely supported by implants where metal or zirconium is frequently used. Even prepared composite teeth are not 100 % resistant to the high chewing forces, with which even ceramic restorations have trouble.

### **IMPORTANT!**

The core of a conceptual procedure in implant prosthetics is examination of the complete process from taking the medical history to post-procedure care. Both dentist and dental technician must collaborate in this process. Since Candolor as the manufacturer has virtually no influence on the nature of the custom-designed construction, the following points must be observed:

- Medical history
- Planning and design
- Intra- and extraoral registration
- Functional alignment after full prosthetics
  - Balanced occlusion and articulation
  - No sole anterior-cuspid guidance
  - Even, equally strong contact points
  - Prevention of shearing contacts
- Axial loading of implants
- Re-occlusion
- Recall for reregistration after 2 to 4 weeks
- Examination once or twice a year

## Contraindication

When taking the medical history, the following questions should be asked to ensure that the prosthetics will function correctly in the mouth over the long term:

- Does the patient belong to a risk group that could affect the success of the prosthetic treatment?
- Are there any indications of bruxism (patient statements, degree of wear of teeth, hypertrophy of the masseter)?
- Are there any indications of greatly increased chewing forces?
- Patient's willingness to cooperate is critical.
- Use of the material is contraindicated in the event of allergy to one of its constituents.

NFC<sup>+</sup> teeth can be used in restorations supported by the mucous membrane and partial dentures for patients who do not belong to one of the above risk groups.

## Description of NFC<sup>+</sup> material

The greatest advantage of this material is the excellent abrasion resistance, which is significantly greater than that of previously used tooth materials. The particularly abrasion-resistant NFC<sup>+</sup> material was developed to counteract premature wear of teeth and the associated loss of dimension. The nanofillers consist of highly dispersed silicon dioxide, which is silanized and forms a unified bond with the new modified UDMA matrix (urethane dimethacrylate). The UDMA matrix is highly crosslinked and the combination with the nanofillers gives the material shock-absorbing properties and significantly improved durability.

## CPS Candulor Prosthetic System

The Candulor Prosthetic System (CPS) stands for esthetic and functional removable prosthetics. The success of the system is based on a systematic prosthetic procedure in the practice and the laboratory. The process-oriented stages of the work are decisive for the success of the final products. The CPS brochure describes the clinical and technical stages of the process in detail.

## Setup and arrangement of teeth

Implant and hybrid prosthetics place high demands on the knowledge and skills of dentists and dental technicians. It is becoming more and more important to be familiar with the principles of full and hybrid prosthetics and to be able to implement them in practice. While functional and static factors are most important for the setup of the posterior teeth, phonetic and esthetic factors are more important for the setup of the anterior teeth.

### Anterior tooth setup

#### PhysioStar® NFC+

An initial challenge is the selection of the appropriate anterior teeth. Both dentist and dental technician require intuition for this. The ToothScout, which assists with evaluating the shape of the patient's teeth, is a useful aid for selecting the right anterior teeth. The width of the nostrils is measured and then the corresponding tooth shape is automatically selected.

Three options for setting up the anterior teeth are available:

- Customized, phonetic setup directly on the patient
- Using the individual information of the physiognomic control template with a silicone tray
- Orientation by CPC (canine-papilla-canine) of the anatomical-morphological reference set in the maxilla

### Posterior tooth setup

Candulor offers two posterior tooth shapes with different occlusion designs for customized restorations and for the different indications:

- Physiological setup with Bonartic® II
- Prof. Dr. A. Gerber setup with Condyloform® II

Bonartic® II	Condyloform® II
<ul style="list-style-type: none"> <li>• Tooth to two-tooth</li> <li>• ABC contacts               <ul style="list-style-type: none"> <li>○ Work side</li> <li>○ Balance side</li> <li>○ Centric</li> </ul> </li> <li>• Condyle-path-related guidance (protrusion 30°, laterotrusion 20°)</li> </ul>	<ul style="list-style-type: none"> <li>• Tooth to tooth</li> <li>• Autonomous chewing stability</li> <li>• Lingual contacts, buccal relief</li> <li>• Joint-related guidance</li> <li>• Prof. Dr. A. Gerber's condylar theory</li> </ul>

Requirements for both occlusion systems:

- Intraoral registration
- Correct positioning of models in the Articulator CA II
- Analysis of the model
- Static arrangement of the posterior teeth
- Balanced occlusion and articulation

## Processing instructions

### Grinding

Roughen the contact faces of the PMMA/composite surfaces with a hard-metal crosscut milling tool or by grit-blasting with Al<sub>2</sub>O<sub>3</sub> (max. 2 bar, 50 - 100 µm). When using shell technique the coating thickness of 1.5 mm to 2.5 mm is essential for an optimum chromatic color effect and to prevent fracture of teeth.

#### **IMPORTANT!**

- Prevent excessive heat generation when grinding NFC<sup>+</sup> composite teeth, max. rpm 15000. Prevent excessive heat generation from pressing too hard.
- Prevent localized overheating with the Alcohol Torch (min. clearance 5 cm)! Do not apply flame or direct heat to teeth.
- A mask and if possible an exhaust system are recommended for protection from grinding dust.

The difference between PMMA and Composite NFC<sup>+</sup> is easily recognized by chip formation and hardness. PMMA forms chips and is softer. Composite forms grinding dust and is harder.

### Cleaning

Thoroughly steam-clean wax residues from surfaces (min. distance 5 cm).

### Bond

The contact surfaces for the bond between the NFC<sup>+</sup> teeth and the autopolymerizing PMMA prosthetic material or veneering material must be grit-blasted with Al<sub>2</sub>O<sub>3</sub> (grain size 50 - 100 µm at 1 bar pressure) and then coated with monomer (e.g. Candulor Aesthetic) for 3 minutes.

#### **IMPORTANT!**

- Prevent excessive heat build-up.
- Do not expose the surface to steam after coating with monomer.

If a veneering composite is used to bond with a tooth, Composite adhesion promoter must be used. Apply the Composite to the contact area directly from the syringe, distribute it evenly with a disposable brush and then light-cure it.

#### **Candulor recommends the following veneering composites:**

- Stains for Resin Teeth (Candulor)
- SR Nexco (Ivoclar Vivadent)
- SR Adoro (Ivoclar Vivadent)
- SR Chromasit (Ivoclar Vivadent)

**See the applicable Instructions for Use for detailed processing instructions.**

### Disinvestment from the flask

Be careful when using a hammer during disinvestment. Heavy blows may damage the teeth.

## Trimming and polishing

For optimum material removal and a fine composite surface quality, use the standard rotary dental instruments.

### **IMPORTANT!**

Do not exceed 15,000 rpm when milling the composite with HM milling tools. Use standard polishing instruments for composites (follow the manufacturer's directions).

**For high-gloss polishing Candulor recommends:**

- Candulor KMG - high-gloss polishing agent

## Danger warnings

- The material has been developed for dental use and must be processed as directed in the instructions for use. The manufacturer does not accept liability for damages caused by use other than directed or improper processing. The user is also responsible for confirming before use that the material is suitable for the intended purpose, particularly if the purpose is not listed in the user information.
- Store out of reach of children.
- Wear a facemask and use an exhaust system for grinding.
- Wear safety glasses.

**Safety data sheets can be found on our website at [www.candulor.com](http://www.candulor.com).**