

# Futurabond® NR

SELF-ETCH-BOND WITH NANO-FILLERS



# Futurabond® NR

SAFE. QUICK. NANO.

Ideally, a bonding agent should provide high adhesion values and long-term stability with the minimum of time and effort. Futurabond NR is a nano-reinforced bonding agent whose excellent bond strength and hence reliability have been confirmed in numerous independent tests. As a self-etching material it is also easy and quick to apply. Futurabond NR is therefore the ideal bonding agent for use with all light-curing restorative materials.

## The nanotechnology in Futurabond® NR

Nanotechnology has proved to be a key technology in the development of dental materials, particularly in the field of restorative materials. This is confirmed by the success of the nano-hybrid composites Grandio and GrandioSO.

The highly functionalised SiO<sub>2</sub> nanoparticles (ø 20 nm) in Futurabond NR lead to a crosslinking of the resin constituents of the bonding agent and thus improve its film-forming properties. The adhesive is therefore able to optimally wet the released collagen fibres and the microretentive etch pattern on the enamel. After polymerisation the nanoparticles are completely integrated into the network formed. This stable bond provides long-term protection against the penetration of dentinal fluid into the hybrid layer.

## Secure adhesion to enamel and dentine

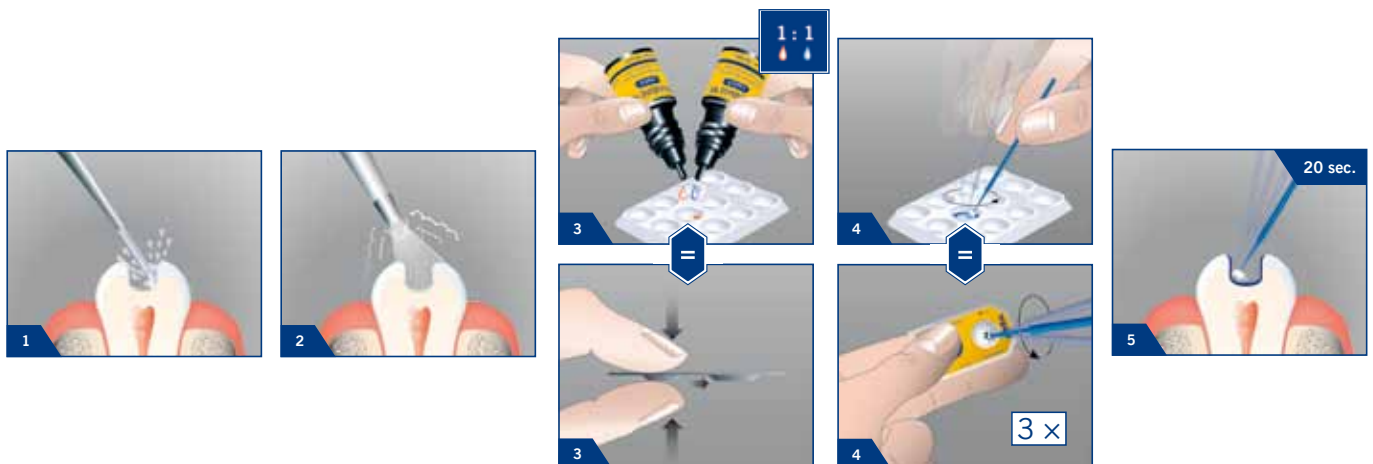
Just one application of Futurabond NR suffices to ensure a long-term bond between the composite and the tooth. The bonding agent infiltrates the prepared enamel and dentine at the same time as the etching process takes place. There is no danger of contamination or destruction of the etch pattern. Futurabond NR achieves excellent adhesion values on dentine and enamel. Futurabond NR has a dentine micro-tensile bond strength of 35.6 MPa. It therefore achieves the same high adhesion values as Total-Etch systems and is at the same time considerably quicker to apply and less technique sensitive.

## Simple application in just 35 seconds

As Futurabond NR is a two-component system, it can be stored at ambient temperature. Both components are mixed together before application and applied in one layer. In this respect the *SingleDose* variant is not only extremely simple and quick to apply but also prevents mixing errors.

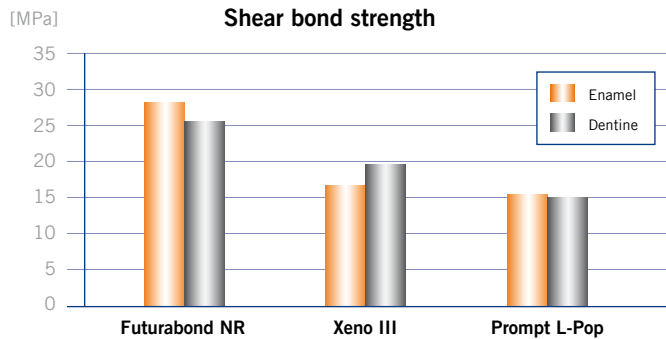
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## APPLICATION

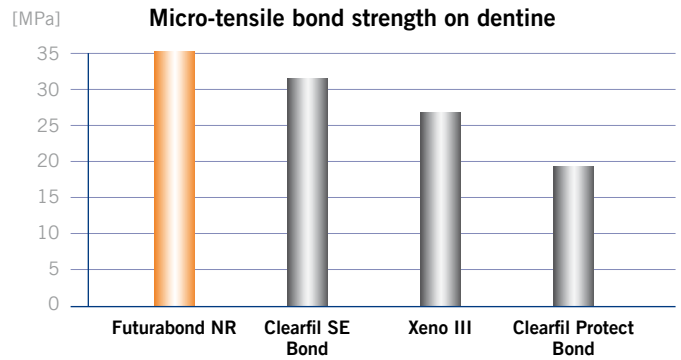


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## FOR LONG-TERM SUCCESS



Source: VOCO GmbH, 2005, Measurement analogous ISO TS 11405, data on file.



Source: C. R. Gernhardt, K. Fechner, H.-G. Schaller, Microtensile Bond Strength of four self conditioning dentin adhesives, J. Dent. Res. Special Issue 2005, IADR Abstract-Nr. 2972.

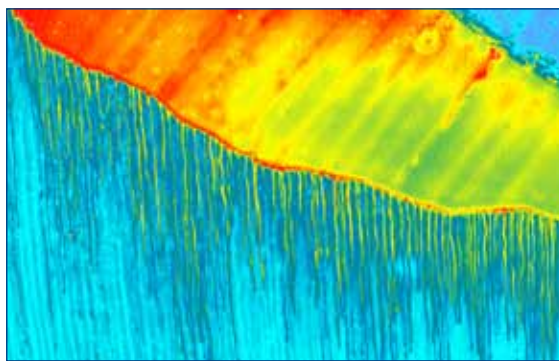
All examined self-etch systems can be considered good alternatives to established total-etch systems. The adhesive values of Futurabond NR were significantly higher than those of the other bonds analysed.

### Marginal integrity

External tests show: Futurabond NR produces equally tight marginal seals on enamel and dentine as conventional total-etch systems. This prevents the formation of secondary caries caused by infiltration of bacteria, thereby ensuring the long-term success of the restoration.

### Secure bond

The use of nanotechnology increases the adhesion values and improves the long-term bond. Problems associated with the total-etch technique such as collapsed collagen fibres, overetching of the dentine or postoperative sensitivities do not arise.



Futurabond NR and Amaris on dentine, CLSM (confocal laser scanning microscopy) × 2,500

Source: Prof. Jorge Uribe Echevarría DDS, PhD, MS, Universidad Nacional de Córdoba, Argentina.

The thorough penetration of Futurabond NR into the dentinal tubules, even into their lateral processes, ensures a reliable seal, thereby effectively preventing postoperative sensitivities.



# Futurabond® NR

## YOU HAVE THE CHOICE

### Indication

Direct restorations with all light-curing restorative materials for all classes of fillings

### SingleDose Advantages

- Only 35 s application time
- One-step blister activation
- Simple, fast and hygienic

### Advantages

- Same adhesive properties as total-etch products
- Long-term marginal integrity
- Moisture tolerant
- Quick and easy to apply – apply once, light cure once
- Universal, for application under all light-curing restorative materials
- Ideal for use in paediatric dentistry as well
- Release of fluorides
- No need for refrigerated storage



### Presentation

REF 1148 bottle 4 ml liquid A, bottle 4 ml liquid B, accessories

REF 1152 50 *SingleDose*, accessories

REF 1153 200 *SingleDose*, accessories

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