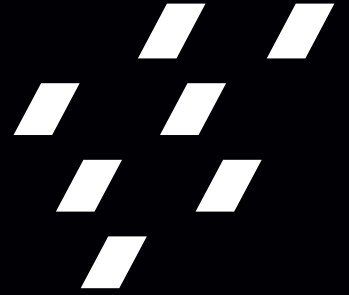


everStick®



Strength like  
never before

*CC*

# everStick® fibres open up new opportunities for patient friendly, minimally invasive procedures and restorations



## everStick® C&B

ø1.5mm (4000 fibres)

For minimally invasive fibre reinforced composite bridges

- Surface retained bridges
- Inlay and onlay bridges
- Laboratory made and temporary bridges

## everStick® PERIO

ø1.2mm (2000 fibres)

For patient friendly splinting

- Periodontal splinting
- Combined periodontal splint and surface retained bridge

## everStick® ORTHO

ø0.75mm (1600 fibres)

For aesthetic retention

- For patient friendly metal free orthodontic retainers

## everStick® POST

ø1.5mm, 1.2mm, 0.9mm

For advanced root canal post and core structures

- Individually formed root canal post

### Progress to the next level of fibre technology

The strength of everStick® E-glass fibres allows clinicians to pioneer new paths in cost effective chair side tooth replacement, splinting, root canal posts and passive orthodontic retention.



9 year follow up

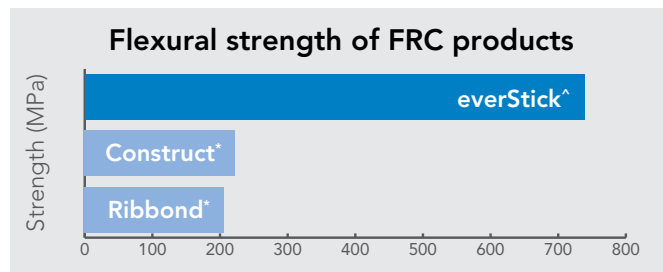
Dr P Vallittu – Finland

# everStick® fibres – the beauty of composite with the strength of steel

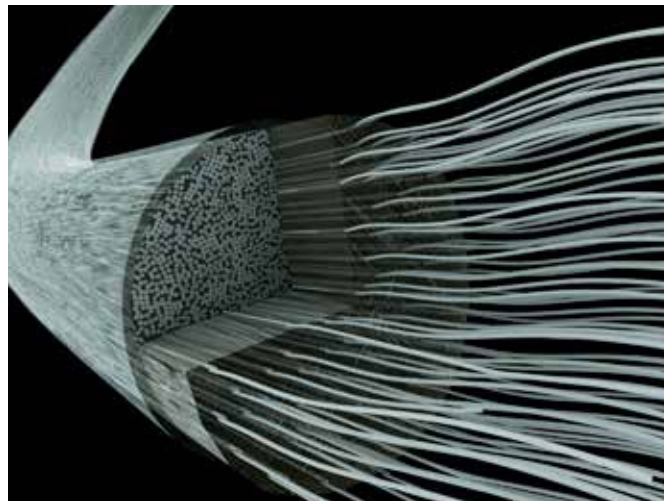
Patented IPN technology is at the heart of everStick® fibres. everStick® fibre bundles have up to 4000 individually silanated E-glass fibres that are fully impregnated with resin. This fusion of fibres and resin forms the exceptionally strong, aesthetic and user-friendly Interpenetrating Polymer Network (IPN). The IPN technology is extensively researched with over 300 publications.

## Fibres for dentistry but not as you know them

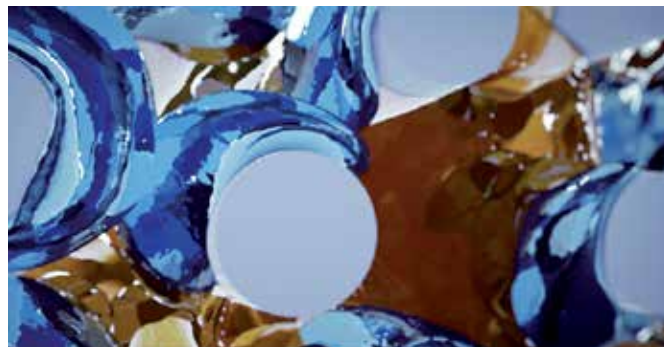
- everStick® fibres are **strong**. IPN technology takes fibre strength to a whole new level.
- everStick® fibres are **simple** to place. The IPN structure means fibres can be positioned exactly where you need them and are easy to manipulate and control.
- everStick® fibres have **no compromise aesthetics**, and because resin is impregnated throughout the fibres the subsequent application of bonding resin and composite is quick and simple.



<sup>^</sup> Silanated E-glass fibre \* Polyethylene fibre. Not a trademark of GC Corporation.



Cross-sectional view of everStick® fibre. Silanated E-glass fibres are impregnated with resin to form the strong and durable IPN structure.



Within the IPN structure the individually silanated E-glass fibres are surrounded by bis-GMA and PMMA.

# everStick®C&B

## The cost-effective, immediate bridge solution

The use of everStick®C&B fibre reinforcement offers a unique treatment method for replacing missing teeth. With everStick®C&B, you can prepare composite bridges reinforced with fibres in one single visit using a minimally invasive technique. This evidence-based fibre reinforcement technology provides you with a metal-free, cost-effective yet highly aesthetic treatment choice.

## Minimally invasive, reversible, one visit

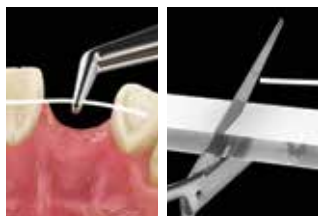


## When might you consider an everStick®C&B solution?

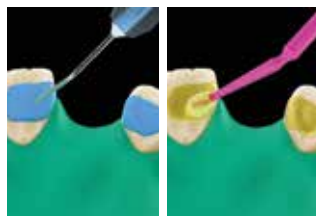
- When the patient needs an economic solution
- When you want to preserve healthy tooth tissue
- In cases requiring immediate bridges after extraction or avulsion due to trauma
- Before or during implant treatment as a temporary solution
- When replacing congenitally missing teeth for young patients
- When there is a need for a provisional bridge
- When the patient prefers an aesthetic solution

everStick®C&B is suitable for full bridge preparations and surface retained adhesive bridges, in both anterior and posterior situations.

## Simple to use



1. Check the occlusion; measure and cut the fibre



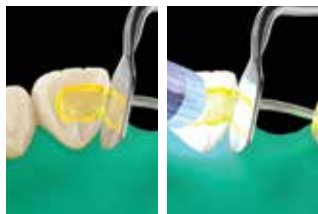
2. Clean, etch and bond



3. Apply G-aenial Universal Flo; do not light-cure!



4. Place the fibre



5. Spread the fibre on the tooth and light-cure



6. Add a transverse fibre to support the pontic



7. Cover the fibre with G-aenial Universal Flo



8. Build the pontic with composite, check the occlusion and finish

## Replacement of a missing tooth in one session with a direct bonding approach



Prof M Peumans – Belgium

# everStick®PERIO

## everStick®PERIO offers a dynamic and cost effective alternative for stabilising and replacing teeth.

Periodontal splinting with everStick®PERIO can be successfully used as a part of periodontal treatment. It has been shown that teeth with healthy, but severely reduced periodontium can be maintained with the aid of splints or fixed bridges.



\* GC internal data

## everStick®PERIO – the ideal splint

- Quick, clean and simple – just cut with scissors and place, fibres remain smooth and do not fray
- Is comfortable for the patient – smooth and highly aesthetic
- Supports teeth effectively – doesn't cause torsional stresses or act as an unintended orthodontic appliance
- Has superior durability – doesn't attract plaque or stain
- Is easy to remove when necessary

## Elastic modulus that matches dentine

The flexural strength of the everStick® fibre (1280MP)\* is as high as that of cast chrome cobalt metal and everStick®PERIO elastic modulus is very close to that of a dentine. The elasticity of the glass fibres may be beneficial to the periodontal tissue because the surrounding supportive tissues are loaded more naturally.

## Improve quality of life

You can immobilise periodontally compromised teeth effectively. Because this is a fixed solution, the patient can eat and smile without difficulty and quality of life improves considerably.

## Quick and easy

Compared to many other fibres, everStick® fibres don't fray and are very easy to handle and position. Just follow the simple placement steps.

## Change of treatment plan – no problem!

Splints can be re-activated and are easy to remodel or repair. If the splint needs to be extended or if an extracted tooth needs to be replaced, there is no need to remove the whole splint. Instead, due to the unique IPN structure the splint can be remodelled.



## everStick®PERIO fibre reinforcement for periodontal splinting



1. Measure and cut the fibre



2. Clean the teeth



3. Etch



4. Bond



5. Apply flowable composite  
(eg. G-aenial Universal Flo)



6. Position the fibre and light-cure  
5-10 sec. per tooth



7. Cover with flowable composite



8. Light-cure and finish

# everStick<sup>®</sup>ORTHO

## Patient friendly, metal free aesthetic orthodontic retention

- Aesthetic – natural tooth shade
- Metal free – comfortable for the patients
- A quick application – no need to pre-bend
- Easy to adapt directly to the teeth and bond in place
- Reliable adhesive bonding



## everStick<sup>®</sup>ORTHO fibre reinforcement for aesthetic retention



1. Measure and cut the fibre



2. Clean the teeth



3. Etch



4. Bond



5. Apply flowable composite



6. Place fibre and light-cure



7. Cover with flowable composite



8. Light-cure and finish



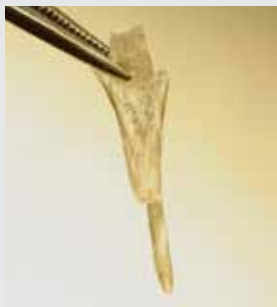
# everStick®POST

## Truly anatomical, custom made and individually shaped posts.

everStick®POST is an ideal solution for curved, oval and large root canals offering the advantages of a cast post but with superior bonding ability.

- Adapts to the morphology of the canal to maximise the adhesive surface and the strength in the most critical part of the tooth
- High flexural strength after light curing
- Elasticity very similar to the natural elasticity of dentine
- Adhesive and micromechanical bonding to both composite, cement and core composite
- Tooth preserving because canal preparation is not needed to the same degree as with traditional prefabricated posts

All the advantages of a cast post WITH superior bonding properties



Dr J Tanner – Finland

# Q&A

## **What are the differences between everStick® fibres and polyethylene fibres?**

Have you tried fibres before and were left disappointed? everStick® is different. The IPN technology infused into the everStick® fibres creates a far stronger fibre and resolves some of the placement and clinical performance issues associated with polyethylene fibres.

IPN technology ensures strong, consistent adhesion between the everStick® fibres and over-layered composite. For polyethylene fibres the adhesion between fibres and composite has been inconsistent. When woven polyethylene fibres are supplied dry they are very difficult to wet with bonding agents and resins. Not being able to achieve adequate resin penetration into the fibres results in a weakened interface leading to delamination or separation of the composite from the polyethylene fibres.

Cutting everStick® fibres with a pair of sharp scissors is much easier and cleaner. Polyethylene fibres need to be cut with special cutting pliers and there is a tendency to create frayed ends which can introduce further placement challenges.

everStick® fibres are easy to place. They can be spread very thinly and evenly and feel comfortable for the patient. Depending on the clinical case the thickness of polyethylene fibres has meant that once covered by composite they can be quite bulky and often uncomfortable for the patient.

Ideally fibres should not be exposed to the oral environment but we recognise in certain clinical situations fibres could be exposed. Should this eventuate everStick® fibres are smoother, better tolerated by the patient and less likely to attract plaque. Exposed polyethylene fibres often feel uncomfortable to the

tongue and have a tendency to absorb moisture leading to discolouration, staining and increased plaque accumulation.

everStick® fibre reinforcements are the only fibre products that have been pre-impregnated with PMMA and bis-GMA polymer to form an IPN structure. The bonding between the individual silanated E-glass fibres and the resin matrix is proven to be strong and stable. For that reason everStick® fibres work effectively with both composite and acrylic systems. In addition, having part of the resin matrix composed of PMMA thermoplastic polymer means the fibre frame surface is always partially re-dissolvable in the composite cement. This property is unique to everStick® materials and allows for strong adhesion of indirect bridges to the composite cement and teeth.

## **Can I add onto everStick® fibres once they are cured?**

Yes. The significance of the IPN structure is that surfaces can be reactivated even after the final polymerisation. Reactivation is achieved by applying the StickRESIN (containing bis-GMA and TEDMA) to the fibres. A small amount of StickRESIN is placed on the fibre surface for 5 minutes and kept in the dark during reactivation.

- PMMA in the matrix of the fibre bundle is partly removed (dissolved) by the StickRESIN during reactivation – this creates spaces for micromechanical retention. In fact, doing this we “etch” the surface of the fibre with the resin.
- Chemical bonding (retention) occurs between the polymerised fibre surface and the new composite because PMMA is a linear polymer and the ends of linear polymer chains react with new resin.

Reactivation is crucial for superior bonding when laboratory manufactured restorations are cemented to teeth and when fibre reinforced composite devices are remodelled or repaired.

### **What material can I use for luting indirect everStick® fibre constructions to the teeth?**

When using an indirect bonding method, the surfaces of the fibre frame are first dissolved for five minutes with StickRESIN or another suitable resin (any light curing resin that does not contain fillers, self-etching monomers or solvents i.e. acetone, ethanol, alcohol, water). After this, luting is completed with either dual or chemically-curing composite cement.

### **What technique and material can I use for bonding direct everStick® fibre constructions to the teeth?**

We recommend a combination of adhesive and flowable composite. After cleaning the prepared tooth the enamel is etched. Apply bonding resin following manufacturer's directions (eg G-ænial Bond) and light cure. A layer of G-ænial Universal Flo is placed onto the bonded surface but not light cured. The everStick® fibre is then placed into the unset G-ænial Universal Flo. Together they are light cured to securely bond everStick® fibres to the tooth. NB The everStick® fibres can be spread to reduce bulk and better adapt to an external bonding surface if desired.

### **Can everStick® fibres be bonded to ceramics?**

Fibre frames can be bonded to ceramics just the same way as composite. The crucial thing is to choose the right etching material (hydro fluoric acid) and adhesive (including a silane coupling agent).

### **How should everStick® products be stored?**

everStick® products should always be stored in a refrigerator (2-8°C). In addition, the products should be protected from light by storing them in their sealed foil packages after use. An elevated temperature and exposure to bright light may shorten the lifetime of everStick® products.

Prior to application, the products are taken out of the refrigerator and the foil package opened, but they should be kept away from bright daylight or artificial light. While cutting the fibre bundle, the rest of the fibre bundle inside the foil package should be kept covered from light. Immediately after cutting a sufficient length for the fibre construction, the foil package is carefully resealed and returned to the refrigerator.

### **How many adjacent pontics can you build using everStick® fibre reinforcement material?**

In each patient case you must always take into consideration other relevant factors such as the occlusion, the antagonistic material, the amount of fibres used and the placing/positioning of the fibres etc. When the prognosis is good, a fibre bridge for three pontics should last as well as bridges made of other materials. The bridge's lifespan is determined by the durability of the composite material and the clinical circumstances.

#### **Anterior region:**

1 pontic: 1 everStick®C&B  
2 pontics: 2 everStick®C&B  
3 pontics: 3 everStick®C&B

#### **Posterior region:**

1 pontic: 2 everStick®C&B  
2 pontics: 3 everStick®C&B  
3 pontics: 4 everStick®C&B



## everStick®C&B

ø1.5mm (4000 fibres)

Refill 12cm x 2

Refill 8cm x 1



## everStick®PERIO

ø1.2mm (2000 fibres)

Refill 12cm x 2

Refill 8cm x 1



## everStick®ORTHO

ø0.75mm (1600 fibres)

Refill 12cm x 2



## everStick®POST

ø1.5mm, 1.2mm, 0.9mm (4000, 2000, 1600 fibres)

Refill ø0.9mm x 10 pieces

Refill ø1.2mm x 10 pieces

Refill ø1.5mm x 10 pieces

## StickRESIN 5ml



## Stick Stepper



## Stick Carrier



## Intro/Starter Kits

### everStick®STARTER KIT

8cm everStick®C&B

8cm everStick®PERIO

30 cm<sup>2</sup> everStick®NET

5x everStick®POST ø1.2

1x 5 ml StickRESIN bottle

1x 2 ml G-aenial Universal Flo syringe

1x StickREFIX D silicone instrument

1x StickSTEPPER

1x StickCARRIER

### everStick®COMBI

8cm everStick®C&B

8cm everStick®PERIO

30 cm<sup>2</sup> everStick®NET

5x everStick®POST ø1.2

1x StickSTEPPER hand instrument

1x StickREFIX D silicone instrument

### everStick®INTRO

8cm everStick®C&B

8cm everStick®PERIO

1x StickREFIX D silicone instrument

### everStick®POST INTRO

5x ø0.9mm

5x ø1.2mm

5x ø1.5mm

1x StickRESIN 5ml



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