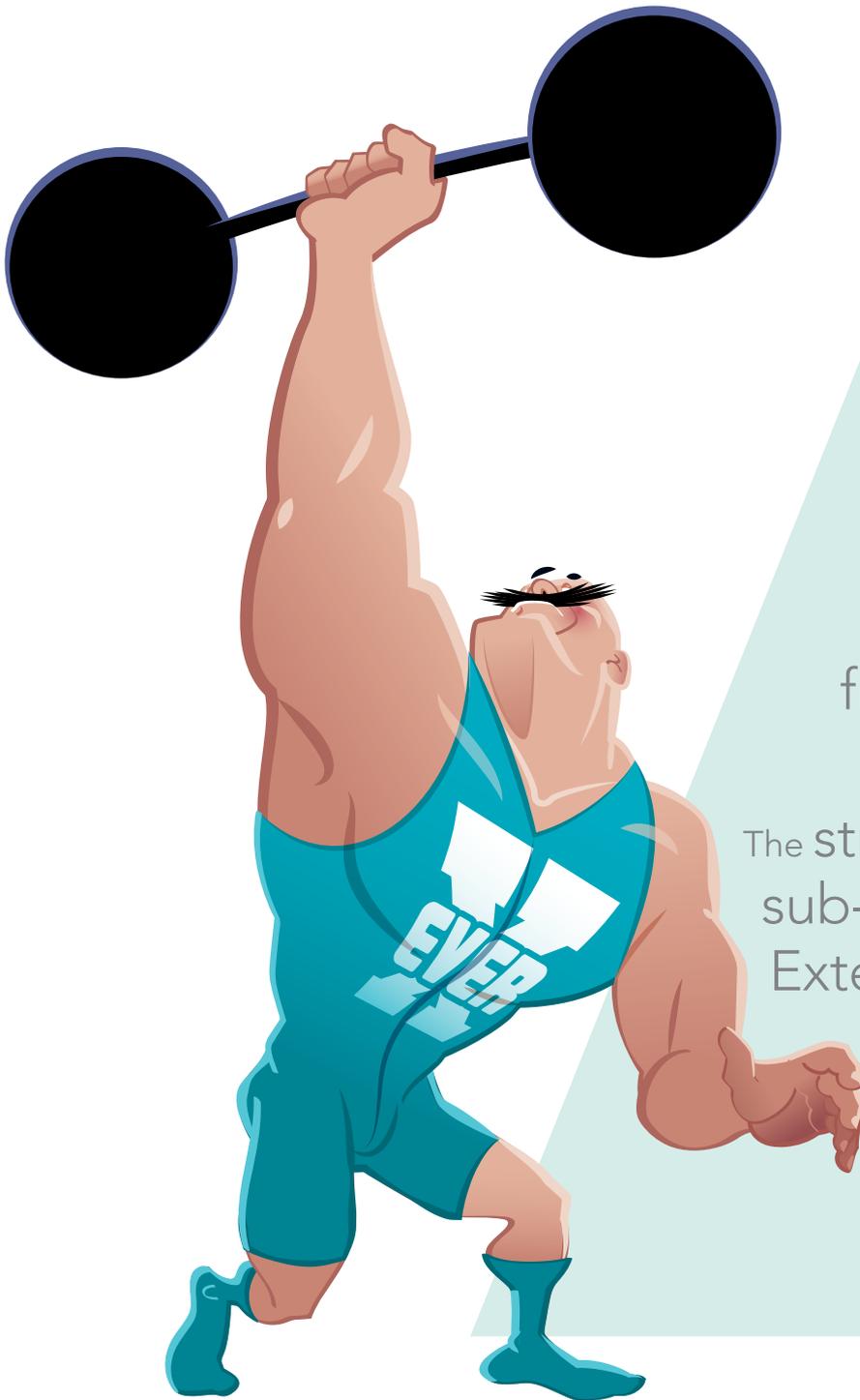


# Discover the power of fibres



everX  
Posterior™  
from GC

The strongest composite  
sub-structure.

Extending the limits  
of direct restorations.

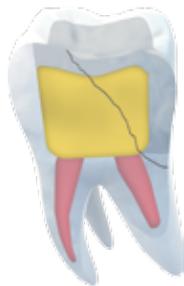
**GC**

# Looking for a solution to prevent cracks?

Evidence shows that fracture of restorations is one of the main causes of restoration replacement. Modern composites offer perfect features for enamel replacement: high wear resistance and aesthetics. However, they are not able to equal dentine when it comes to resistance to fracture. **everX Posterior is a fibre-reinforced composite** designed to replace dentine and to be used in conjunction with a conventional composite such as G-ænial Posterior as the enamel replacement layer. Using the combination of both materials enables a **biomimetic restoration of teeth**.

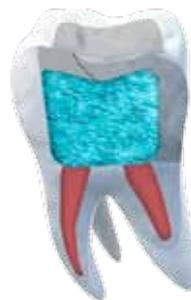
#### Conventional composite:

unfavourable fracture line. Crack propagation through the filling AND the tooth structure below the gingival line, making the repair almost impossible.



#### everX Posterior substructure:

favourable fracture line. Crack propagation is arrested and redirected by the everX Posterior substructure, allowing repair of the restoration.



## everX Posterior™ reinforces your large posterior restorations

The short fibres used in everX Posterior provide a **fracture toughness** equal to collagen-containing dentine and **almost double that of a conventional composite**. This makes everX Posterior the **strongest possible sub-structure** to reinforce any composite restoration in large preparations.

The cross-linked fibres form a network inside the composite (same principle as with the iron rebar used in construction), to make the material stronger.



# Fibres prevent crack propagation

Cracks are a common issue, often starting as a result of thousands of repetitive bites, at the surface of the material and propagating through the filling and the teeth. The short **fibres prevent and arrest crack propagation** that

often starts from the surface of the composite material and slowly propagates through the filling and the tooth structure.



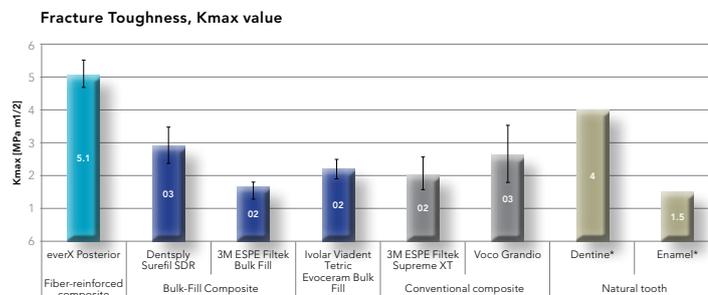
Conventional composite: Crack propagation through the filling.



Crack propagation is arrested.

## Fibres bring strength

Fracture toughness equivalent to dentine and almost double that of other composites shows that the cross-linked fibres bring unsurpassed strength to the restoration. This makes everX Posterior the ideal dentine replacement, especially in large preparations.



Fracture Toughness (modified ISO 20795-1:2008 method) University of Turku, Finland, 2010-2012 (unpublished data)

\*Imbeni et al. The dentin-enamel junction and the fracture of human teeth. Nature Mater 2005;4:229-232

## Fibres maximise bonding

Bonding different materials is a key factor in the layering technique. Since everX Posterior is used in the sandwich technique, the bonding between the 2 composites will be important to ensure the homogeneity of the whole restoration. On top of chemical adhesion, fibres will bring mechanical retention to ensure a **perfect bond to any overlaying composite and to the tooth structure.**



Presence of Fibres in everX Posterior increase the adhesion by providing mechanical retention University of Turku, Finland, 2013 magnification x16

# Benefit from an easy 4 mm layer application

## CLASS I CAVITIES



1.  
Prepare cavity



2.  
Bond and light-cure

3a.  
Build first the missing wall(s)  
with composite



3b.  
Apply everX Posterior  
in layer up to 4 mm



4.  
Light-cure 10-20 sec.



5.  
Cover with composite



## CLASS II AND LARGE CAVITIES



everX Posterior is based on years of research on the use of fibres in dentistry, conducted by Stick Tech LTD and the University of Turku, Finland and is already supported by numerous international publications.

1. Load bearing capacity of fibre-reinforced and particulate filler composite resin combination; Garoushi S. et al; J. of Dent (2006) 34, 179-184
2. Fiber-reinforced composite substructure: Load-bearing capacity of an onlay restoration. Garoushi S. et al; Acta Odontol Scand 2006; 64:281-285
3. Direct composite resin restoration of an anterior tooth: effect of fiber-reinforced composite substructure. Garoushi S. et al; Eur J Prosthodont Restor Dent 2007; 15:61-66.
4. Bond strength of fiber reinforced composite substructure to restorative composites. Tanner J. et al; IADR 2011; Abstract 1993
5. Restoration of endodontically treated molars using fiber reinforced composite substructure. Lammi M. et al; IADR 2011; Abstract 2517
6. Preliminary clinical evaluation of short fiber-reinforced composite in posterior teeth: 12-month report. Garoushi S. et al; Open Dent J. 2012; 6:41-45

# Increase your restorative options

Thanks to its ability to form a strong and reinforcing sub-structure, everX Posterior opens up new possibilities, including restorations of cavities where inlays and onlays would usually be indicated:

- Extensive preparations involving 3 or more surfaces



Dr. M. Diermaes,  
Denmark

- Extensive preparations with missing cusps



Dr. Y. Marinova,  
Bulgaria

- Deep preparations (Class I, II and endodontically treated teeth)



Dr. R. Veleninov,  
Bulgaria

- Preparations for amalgam replacements (especially since amalgams can be associated with the initiation of cracks and cusp fracture)

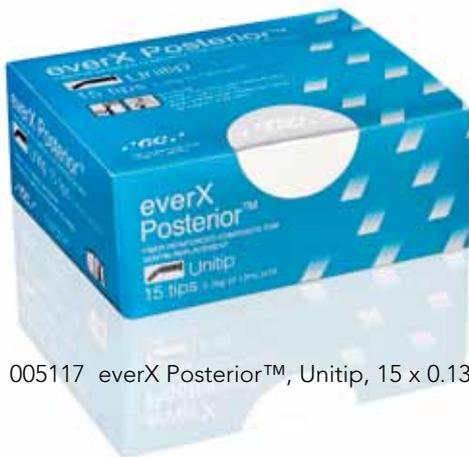
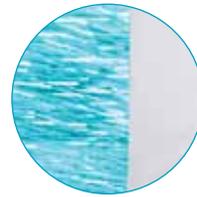
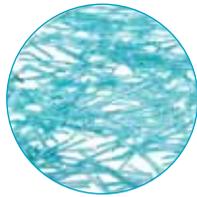


Prof. M. Peumans,  
Belgium

everX Posterior™ is the answer to the growing demand for an economic solution for large restorations.

# Reinforce your restorations with the strength of fibres

- Short fibres prevent fracture propagation in fillings and tooth structure
- Fracture toughness equivalent to dentine and almost double that of any other composite will result in the restoration having unsurpassed strength
- 4 mm increments can be cured simultaneously, reducing procedure time
- Reliable bond to any overlying composite as well as to the tooth substance



## Related products

GC G-ænial Bond



GC G-ænial Posterior



005117 everX Posterior™, Unitip, 15 x 0.13 ml, Universal shade (transparent)

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