



Strong to the core

everX Flow

Short-fibre reinforced flowable
composite for dentine replacement

3M

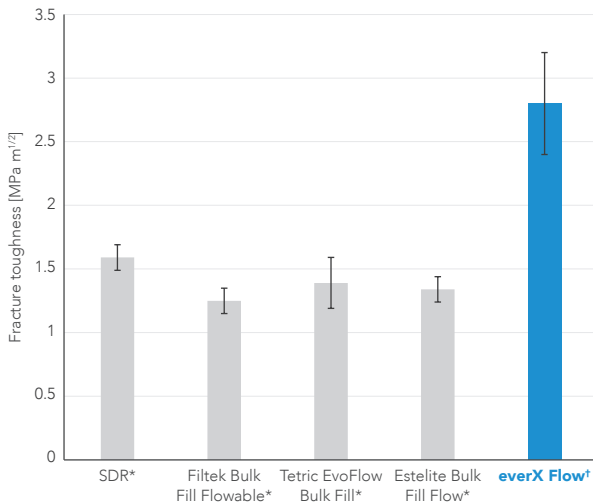
everX Flow – the toughest composite substructure to reinforce your restorations

everX Flow is a highly fracture tough, reinforcing composite substructure incorporating unique micro-fibre and full silane coverage technologies. To help you achieve stronger and more durable posterior restorations, place everX Flow as a dentine replacement under composite or use as a core under indirect prostheses.



Dr Lucile Dahan, France

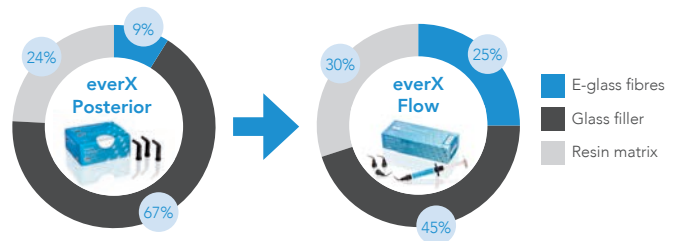
Fracture Toughness



Garoushi S, Gargoum A, Vallittu P, Lassila L, Short fibre-reinforced composite restorations: A review of the current literature. Dental Biomaterials 2018

[†]everX Flow referenced as SFRC

*Not a trademark of GC Corporation



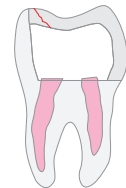
Stops fracture propagation

Crack propagation is arrested and redirected by the fibre-reinforced substructure.

Conventional composite



Fibre-reinforced composite



Lassila L, Keulemans F, Säilynoja E, Vallittu PK, Garoushi S. Mechanical properties and fracture behavior of flowable fiber reinforced composite restorations. Dent Mater. 2018 Apr;34(4):598-606.

Once a tooth is cracked, it becomes difficult to repair and reinforce the remaining tooth structure:

- Risk of cuspal fracture – leading to little residual tooth structure to bond to and a limited longevity of the tooth in the arch
- Risk of fracture under the gingival line – leading to extraction.

Alvanforoush N, Palamara J, Wong RH, Burrow MF. Comparison between published clinical success of direct resin composite restorations in vital posterior teeth in 1995-2005 and 2006-2016 periods. Aust Dent J 2017 Jun;62(2):132-145. doi: 10.1111/adj.12487. Epub 2017 Apr 19.

Unmatchable strength from fibres that flow



everX Flow – the first choice for

- Dentine replacement:
 - / beneath any posterior cavity, including large and deep cavities
 - / following crack diagnosis
 - / following amalgam removal
 - / where inlays and onlays would also be recommended
 - / beneath any direct composite or indirect ceramic restoration under heavy occlusal load
- Core build-up under indirect prostheses, including post and core substructures
- Substructure for endodontically-treated teeth

Effortless placement, perfect adaptation

everX Flow adapts to every preparation thanks to optimal thixotropy and controlled flow, allowing ease of placement without slumping.



Two shade options for greater flexibility



Translucent shade

Optimal for deep posterior cavities
Depth of cure: 5.5mm



Dentin shade

Optimal for more aesthetic results and for core build-up
Depth of cure: 2.0mm

Key clinical applications

The biomimetic restorative technique, using SFRC (short fibre-reinforced composite) substructures, can be used routinely for coronal restorations and teeth with large cavities in high stress-bearing areas.*

Core build-up preparations



Initial situation.



Apply, air dry and light-cure bond.



Build the core with everX Flow.



Light-cure, for 20 sec. per layer.



Contour and finish core, final preparation.

Direct restorations



Prepare the cavity.



Bond and light-cure.



In the case of a Class II cavity, first build the missing walls with a conventional composite.



Fill the cavity with everX Flow.



Light-cure for 20 sec. per layer.



Cover with a conventional composite (1-2mm thickness).

*Garoushi S, Gargoum A, Vallittu P, Lassila L. Short fibre-reinforced composite restorations: A review of the current literature. Dental Biomaterials 2018

Clinical observations

Extensive preparations, including missing cusps and amalgam replacements



Dr Georg Benjamin, Germany

Class II preparations



Dr Rudolf Novotny, Slovakia

Endodontically-treated teeth

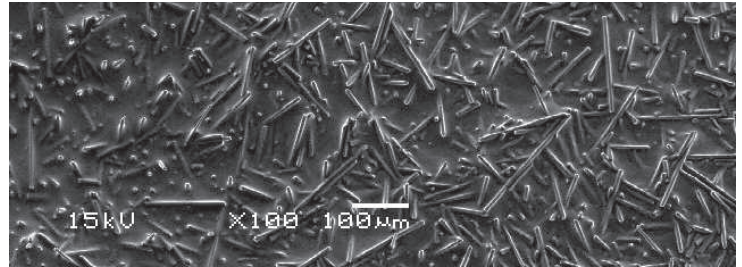


Dr Lucile Dahan, France

everX Flow provides maximum reinforcement for optimum fracture resistance

Optimal aspect ratio (OAR) technology

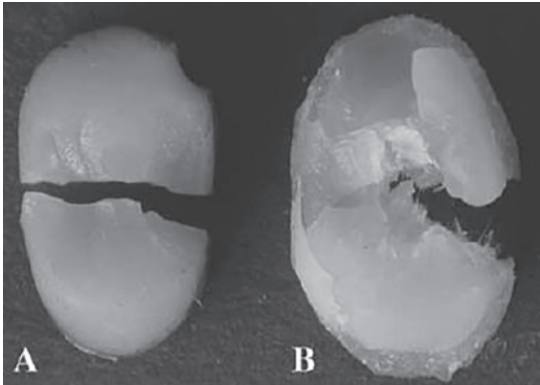
everX Flow's E-glass fibres demonstrate a critical length to diameter ratio to provide an optimal reinforcement effect. FSC (full silane coverage) technology is also used for both the filler particles and fibres in everX Flow, to deliver maximum strength and durability.



SEM image courtesy of Dr Lippo Lassila, University of Turku, Finland.

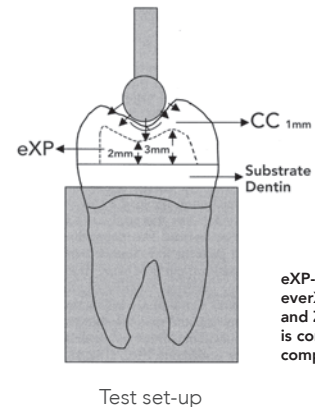
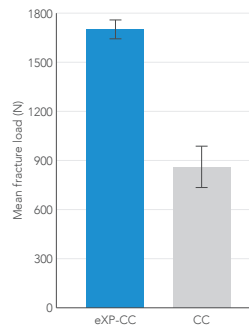
Fibres increase fracture resistance and load bearing capacity

SFRC (short fibre-reinforced composite) can be used as a direct core build-up material that can effectively resist heavy occlusal forces against fracture and can reinforce the remaining tooth structure in endodontically-treated teeth. Several studies have shown that the fibre-reinforced composite substructure supports the composite restoration and serves as a crack-prevention layer.



Garoushi S, Vallittu PK, Lassila L. Fracture resistance of short, randomly oriented, glass fiber-reinforced composite premolar crowns. Acta Biomater 2007;3:779-784.

Mean Fracture Load



eXP-CC is bilayered everX Posterior and Z250*. CC is conventional composite Z250*.

Garoushi S, Lassila LVJ, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. Dent Mater 2007;e;23:17-23.

*Not a trademark of GC Corporation

Q & A

What is the filler loading of everX Flow?

everX Flow has a filler loading of 70% by weight.

What are the fibres in everX Flow?

everX Flow contains E-glass micro fibres. The average fibre length is 140µm and the average diameter is 6µm.

What are the filler particles in everX Flow?

everX Flow contains barium silicate glass filler particles with an average size of 700nm.

What is the resin matrix of everX Flow?

everX Flow contains Bis-EMA and UDMA resin. It does NOT contain Bis-GMA.

What is the radiopacity of everX Flow?

everX Flow is easily detectable radiographically with a radiopacity of 223%Al.

Should everX Flow always be fully covered with a conventional composite?

Yes, everX Flow should always be fully covered with a conventional composite, 1–2mm thick, including the interproximal area of 0.5mm, as the fibres inside the material can lead to a rough surface if left uncovered.

Is it better to use a paste or an injectable composite resin to cover everX Flow?

Both paste and injectable composites can be used to cover everX Flow, as long as their physical properties are sufficient. The choice is based on the handling preferences of the clinician.

Is a resin bonding agent required between everX Flow and the overlaying composite layer?

No, the adhesion between everX Flow and any conventional composite is very good and no bonding agent is required.

Can I use everX Flow in both small and large cavities?

Yes, due to its flowable and thixotropic viscosity, everX Flow can easily be used in all types of cavities, including shallow ones, particularly when managing existing crack formation.

Can I use everX Flow in deep carious lesions where softened dentine is left at the base of the cavity to avoid pulp exposure?

It is highly recommended that, in this situation, a glass ionomer cement is used to line the cavity prior to the utilisation of everX Flow as a reinforcing material.

What is the depth of cure and recommended duration of cure?

Irradiation time:

10 sec. (High Power LED) (>1200 mW/cm²)

20 sec. (Halogen/LED) (>700 mW/cm²)

Depth of cure:

Bulk shade – 5.5mm, Dentin shade – 2.0mm

What is the shelf-life of everX Flow?

The shelf-life of everX Flow is 3 years.



everX Flow

1x everX Flow, Syringe 2 mL (3.7g) – Dentin shade
 1x everX Flow, Syringe 2 mL (3.7g) – Bulk shade (Translucent)
 20x Dispensing Tip



everX Posterior

15x unitip (0.13mL, 0.25g each) – Universal shade (Translucent)



G-aenial® Universal Injectable

1 Syringe Pack

1x Syringe 1.7g (1.0mL), 5x Dispensing Tip Needle,
 5x Dispensing Tip Long Needle, 1x Light-protective Cap

Dispensing Tip Refill

20x Dispensing Tip Long Needle

Shades:

XBW, BW, A1, A2, A3, A3.5, A4, B1, B2, CV, CVD, AO1, AO2, AO3, JE, AE



Since 1921
 Towards Century of Health

GC Asia Dental Pte Ltd
 5 Tampines Central 1,
 #06-01, Tampines Plaza
 Singapore 529541

T: +65 6546 7588
 F: +65 6546 7577
sea.gcasiadental.com