

Gradia Core™
and **Fiber Post™**
from **GC.**

Complete system
for aesthetic
core build-up
and post luting
in only one sitting.

GC

Simplify your daily work with an intelligent system

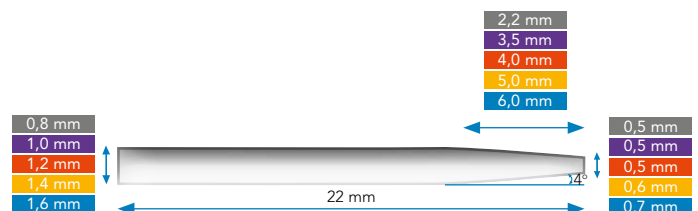
Are you looking to combine simple clinical solutions and time saving with the best performances and aesthetics for your core build-up restorations?

GC captures its wealth of experience, as a world leader in dental materials technology, in the new core build-up system, **Gradia Core** and **GC Fiber Post**.

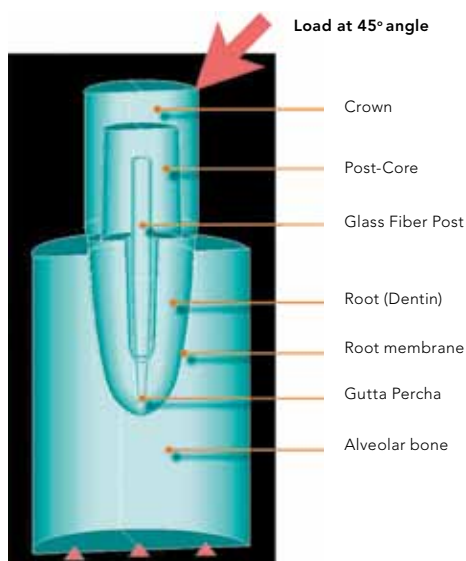
Finally, you can make your life easier with an ideal combination of fiber posts and a composite indicated for luting and core reconstruction offering optimized handling properties, long lasting performance in a conservative approach.

Tooth-friendly system based on minimum intervention principles:

- Minimum tooth preparation:**
 thanks to the superior adhesive property of **Gradia Core** a conservative preparation technique can be used.
- Minimum root space enlargement:**
 the wide selection of **GC Fiber Post** sizes allow for minimal canal preparation.
- Minimized stress on remaining tooth structure:**
 unlike casted inlay core or metal posts, the modulus of elasticity of the **GC Fiber Post** and **Gradia Core** system is close to that of natural dentin, allowing better stress distribution and minimizing the risk of root fracture. And with one material for luting and core build-up, the whole construction becomes one.

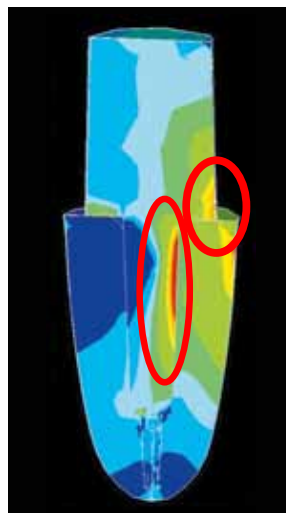


Computer simulated test set-up



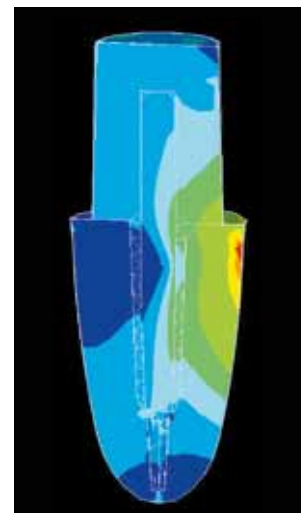
Cast metal post core

The red parts indicate that higher stress is found in the boundary area between core and tooth structure for both the core and post.



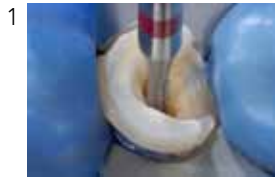
Glass fiber + resin core

Stress is diffused throughout the structure and flows smoothly.

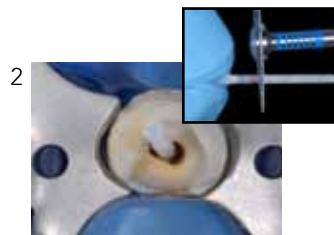


Step by Step

The **GC Fiber Post** and **Gradia Core** system can easily be integrated into your daily restorative routines. All you need to do is prepare, bond, lute and build!



1 Prepare canal, leaving 4 mm Gutta Percha.



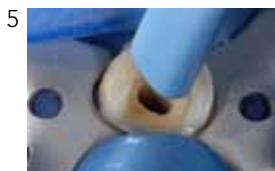
2 Try in the post and adapt to the desired length with a diamond disk.



3 Mix liquids A & B of Gradia Core Self-Etching Bond.



4 Apply the mixed Self-Etching Bond to the prepared root canal and coronal tooth structure and leave it for 30 seconds.



5 Blow dry with medium air pressure for 10 seconds.



6 Light cure for 10 seconds.



7 Apply a silane coupling agent like Ceramic Primer A & B to the **GC Fiber Post** and dry.



8 Dispense **Gradia Core** into the root canal, seat the post and light cure for several seconds.



9 Continue dispensing **Gradia Core** around the post to form the core.



10 Light cure the surfaces for 10 seconds each. Once set, prepare the core in the standard technique.

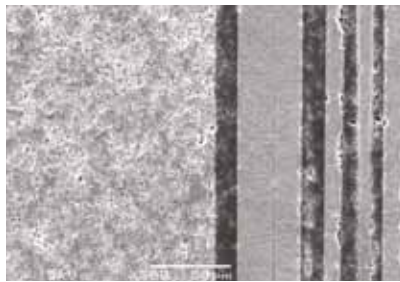
Bring out the best in restorative dentistry

SECURED ADHESION

Dual-cure and contact-cure to achieve high bond strength:

The one-step Self-Etching Bond of **Gradia Core** cures securely and thoroughly, in both curing modes. In addition, it contains a polymerization accelerator that helps the curing of the core paste when it comes into contact at the interface.

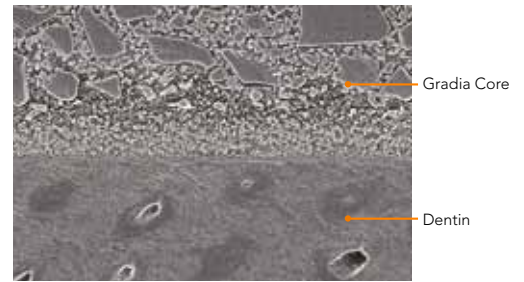
Adhesive interface between Gradia Core and GC Fiber Post



Gradia Core GC Fiber Post

The Second Department of Prosthetic Dentistry, Tsurumi University School of Dental Medicine

Adhesive interface between Gradia Core and dentin



Toranomon Hospital Dental Clinic

Unique light transmission:

With excellent light guidance, the **GC Fiber Posts** further ensures the polymerization of the paste, even in deep post spaces.



GC Fiber Post



Competitor Prof. M. Ferrari

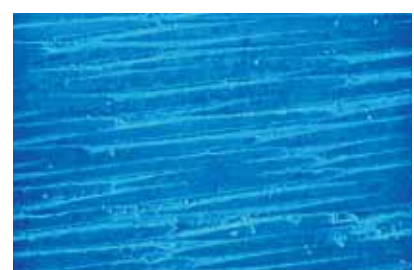
OPTIMAL PERFORMANCE

Strong support of prosthetic element:

Gradia Core contains 75% dense fillers, giving the material a high compressive strength and enhancing its resistance to occlusal pressure. On the other side, **GC Fiber Post** offers a high density of glass fibers (77% in weight) with no structural defects, ensuring a high resistance to load.



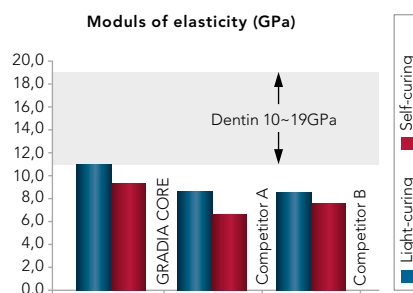
Cross section



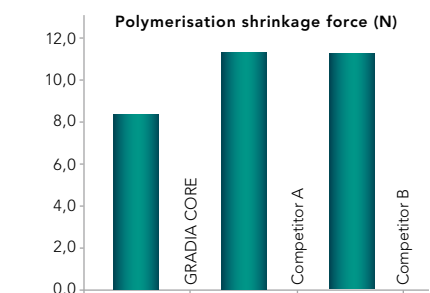
Longitudinal section

Well balanced physical properties:

To reduce the risk of root fracture and to ensure long lasting restorations, **Gradia Core** has a modulus of elasticity similar to dentin and low shrinkage stress.



Source: GC R&D Internal Data



Source: GC R&D Internal Data

Optimal handling

Gradia Core and **GC Fiber Post** offer you several advantages in handling, making them your ideal partners for high quality restorations.

- **Easy bonding with reduced steps:**

The **Gradia Core** self-etching dual cure bonding system employs a simplified one-step application.

- **Comfortable dispenser and cartridge system:**

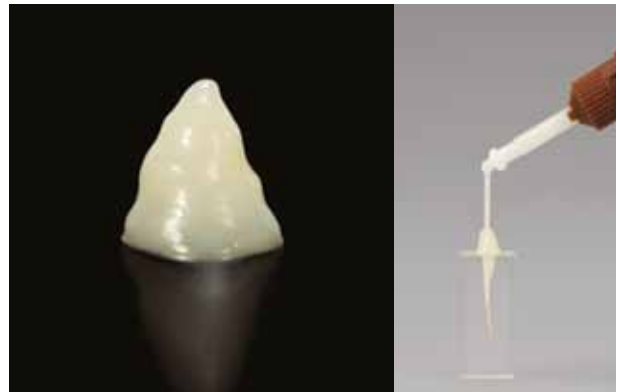
Thanks to very small extension tips, the material can be dispensed in a precise manner, avoiding waste.

- **Luting and core build-up with 1 material:**

With adapted viscosities and thixotropic behavior, **Gradia Core** will flow under pressure during post luting, but will remain fixed in position during core building.



Perfect Fluidity for Post Luting



Ideal Thixotropy for Core Build-up

- **Cutting feeling similar to dentin:**

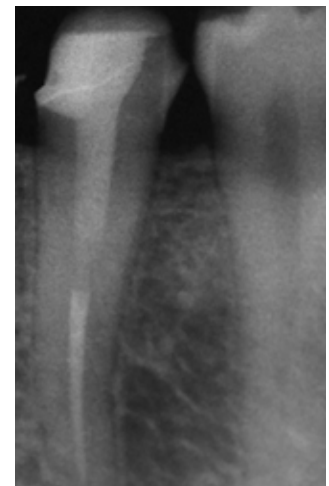
Due to its filler content, the material mimics natural dentin when cutting. Finishing becomes easier with smooth edges at the interface between the tooth structure and core material.

- **Work at your own pace:**

Gradia Core offers ideal working and setting times, whether in light or dual-cure modes. Very effective initial curing means that the finishing phase can already start from 5 minutes after application.

- **Radiopacity:**

GC Fiber Post and **Gradia Core** are both uniquely adapted for an easy x-ray monitoring. **Gradia Core** has a radiopacity that is superior to enamel.



Packaging

GC Gradia Core and **GC Fiber Post** are available in a selection of convenient packages to suit the needs of your practice.



GC GRADIA CORE

GC Gradia Core Kit

1 **GC Gradia Core** Cartridge 10mL (20g); 1 Self-Etching Bonding Liquid A 3 mL; 1 Self-Etching Bonding Liquid B 1,5 mL; 20 Automix tips, 20 endo extension tips, 1 Dappen Dish; 1 holder with 25 Micro Tip Applicator

GC Gradia Core Intro Package

1 **GC Gradia Core** Kit; 1 Cartridge Dispenser

Refills

GC Gradia Core Cartridge refill: 1 **Gradia Core** Cartridge 10 mL (20g), 20 Automix tips, 20 endo extension tips; **GC Gradia Core** Self-Etching Bond Liquid A Refill; 3mL bottle; **GC Gradia Core** Self-Etching Bond Liquid B Refill; 1,5 mL bottle

Accessories

GC Gradia Core Cartridge Dispenser, 1 piece

GC FIBER POST

GC Fiber Post Assortment kit

15 **Fiber Posts**: 5 of 1.0mm, 5 of 1.2 mm, 5 of 1.4 mm; 2 **Drills**: 1 of 1.2 mm, 1 of 1.4 mm

GC Fiber Post Intro Package

1 **GC Fiber Post** Assortment Kit; 1 Ceramic Primer

Refills

GC Fiber Post Refill; 10 Fiber Posts in unit dose blister available in size 0.8; 1.0; 1.2; 1.4; 1.6; **GC Fiber Post** Drill Refill; 1 piece available in size 1.2; 1.4; 1.6; **GC Fiber Post** Drill Refill; 1 piece available in size 1.2; 1.4; 1.6; **GC Ceramic Primer**: 2 Bottles with 2 mL of liquid each

System

GC Gradia Core and GC Fiber Post Complete system

1 **GC Fiber Post** Assortment Kit; 1 Ceramic Primer; 1 **GC Gradia Core** Kit; 1 **GC Gradia Core** Cartridge Dispenser

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