

GC FIBER POST & GRADIA® CORE



GRADIA CORE has a one-step, self-etching bonding system and the easy mixing system results in a homogeneous mix of the two paste components with an optimal consistency, long working time and rapid dual-cure.

GC FIBER POST Placement: Clinical Steps

Step 1: Preparing the Canal and GC FIBER POST



Root canal preparation.



Trial fit of the post. Determine the length.



Apply self etching bond to the prep, leave for 30 seconds. Blow dry with air syringe using moderate pressure for 10 seconds. Light cure for 10 seconds.



Apply GC CERAMIC PRIMER to the GC FIBER POST and dry.

Clinical photos courtesy of Dr. K. Matsuo

Step 2: Placing the Post and Building the Core



Dispense GRADIA CORE into the root canal.



Seat the post and light cure several seconds to tack cure.

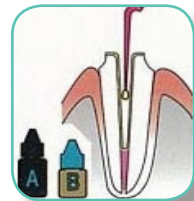


Continue dispensing GRADIA CORE around the post to form the core.



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

Easy Mixing, Cementation and Core Build-Up



Bonding Treatment

Easy to use: 2 liquid mixing, 1 step treatment bonding system.



Post Cementation and Core Build-Up

EM (Easy Mixing) system: Fewer bubbles and easy extrusion of the cement. The excellent flow characteristics and paste consistency enable placement without use of a pre-formed matrix. The paste also offers a long working time for accurate placement.



Curing

Snap curing, deep curing depth, quick setting time.



Prepare the Teeth

Material cuts similarly to dentin.



GC FIBER POST - KITS

400001 GC FIBER POST - ASSORTMENT KIT
Contains: 5 Posts – Diameter 1.2, 5 Posts – Diameter 1.4, 5 Posts – Diameter 1.6, 1 Drill – Diameter 1.2, 1 Drill – Diameter 1.4, 1 Drill – Diameter 1.6, IFU, Technique Card

GC FIBER POST - REFILLS

Contains: 10 Posts of one size.

400002 Diameter 0.8 **400003 Diameter 1.0**
400004 Diameter 1.2 **400005 Diameter 1.4**
400006 Diameter 1.6

GC FIBER POST - DRILL REFILLS

Contains: 1 Drill of one size.

400007 Diameter 1.2 **400008 Diameter 1.4**
400009 Diameter 1.6

GRADIA CORE

003651 GRADIA CORE KIT
Contains: 10 mL cartridge (1), self-etching bond liquid A (1), self-etching bond liquid B (1), mixing tips (20), intra-oral nozzle (20), micro tip applicator (1), micro tip holder (1), dispensing dish (1)

003652 GRADIA CORE CARTRIDGE REFILL
Contains: 10 mL (20 g) cartridge

003653 GRADIA CORE SELF ETCHING BOND LIQUID A REFILL
Contains: One bottle 3 mL

003654 GRADIA CORE SELF ETCHING BOND LIQUID B REFILL
Contains: One bottle 1.5 mL

GRADIA CORE - KITS AND GUN

400011 GRADIA CORE POST & CORE SYSTEM KIT
Contains: 1 GRADIA CORE KIT (10 mL cartridge (1), self-etching bond liquid A (1), self-etching bond liquid B (1), mixing tips (20), intra-oral nozzle (20), micro tip applicator (1), micro tip holder (1), dispensing dish (1), 1 GC FIBER POST ASSORTMENT KIT (5 Posts each - diameter 1.2, 1.4, 1.6, 1 Drill each - diameter 1.2, 1.4, 1.6, Technique Card, IFU, 1 GRADIA CORE DISPENSER GUN

400010 GRADIA CORE DISPENSER GUN
Contains: One Dispenser Gun to be used exclusively with GRADIA CORE



GC FIBER POST GRADIA® CORE

Strength and
Esthetics for a
Strong Foundation



SKU #606200
800.323.7063
www.gcamerica.com
www.gcatraining.com
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GC FIBER POST & GRADIA® CORE - Strength and Esthetics for a Strong Foundation



GC FIBER POST Clinical Benefits:

- High strength
- Low modulus of elasticity - similar to dentin
- Minimal dentin removal due to tapered post design
- Strong and intimate bond with GRADIA CORE
- Radiopaque
- Esthetic, with excellent light transmission
- Biocompatible and non-corrosive

GC FIBER POSTS are designed to offer a low modulus of elasticity similar to dentin combined with high flexural strength superior to metal posts, which reduces the risk of stress transfer and root fractures and results in superior fatigue resistance.^{1,2,3}

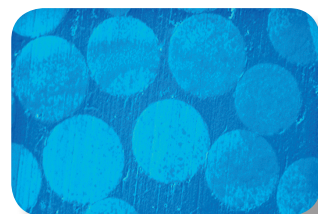


Reference: Dr. Kaito (Nihonbashi Dental Clinic, Tokyo University of Science Graduate School Faculty of Engineering), Dr. Shinya (The Nippon Dental University).

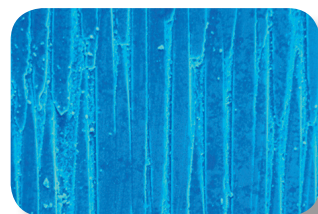
The excellent fatigue resistance is attributable to the unique chemistry and high filler content of GC FIBER POSTS, reducing risk of restoration failure.

The taper design of GC FIBER POSTS maximizes adaptation and minimizes dentin removal, preserving root structure and strength. Its radiopacity enables easy checking of the post length at try-in.

Even and thorough distribution of fibers ensures higher strength.



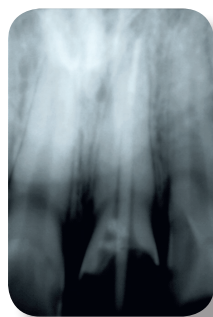
Cross-Section



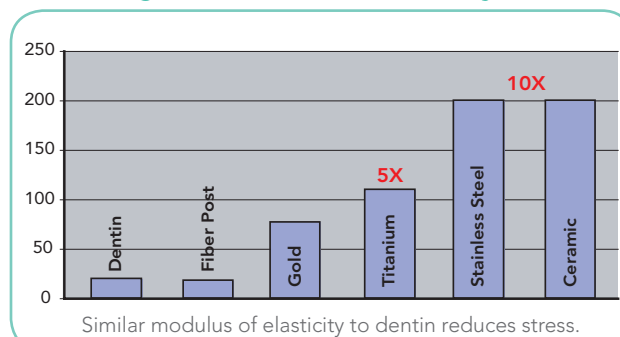
Longitudinal

Radiopaque for easy checking at try-in. Taper preserves root dentin.

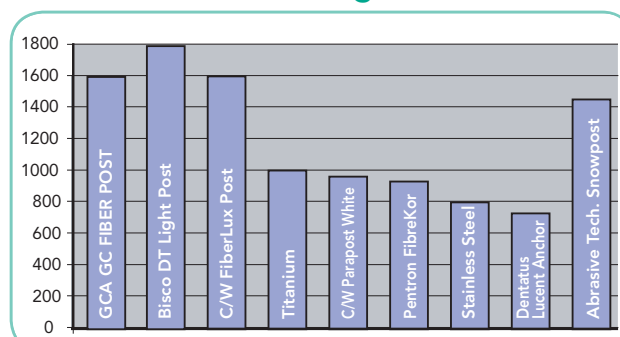
Reference: Dr. Matsumura (Tokyo Medical and Dental University).



Young's Modulus of Elasticity (GPa)



Flexural Strength (MPa)



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GRADIA CORE Clinical Benefits:

- Modulus of elasticity similar to GC FIBER POST and dentin
- High flexural and compressive strength
- Self-etching bonding system, easy mixing and handling
- Excellent flow - prevents voids in bonded post and core
- High bond strength to enamel, dentin and GC FIBER POSTS
- High microtensile strength⁴
- More than 3 minutes working time
- Rapid, deep dual-cure
- Cutting characteristics similar to dentin
- Radiopaque

The Combination of GC FIBER POST and GRADIA CORE Offers Unsurpassed Esthetics

- White translucent post optimizes esthetics, removes risk of shadowing
- Optimal light transmission through post and core for light-curing⁵

GC FIBER POST and GRADIA CORE are both radiopaque, allowing differentiation between tooth structure, the fiber post and the composite core radiographically.

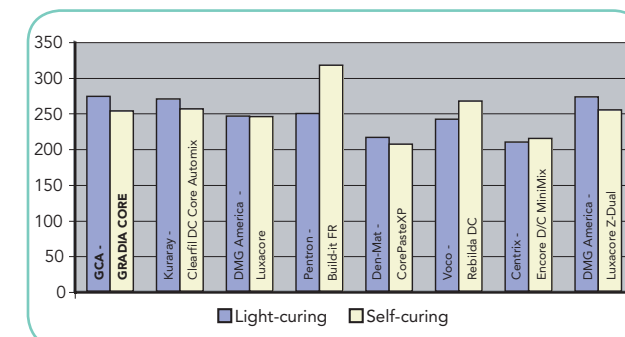


GC FIBER POST + GRADIA CORE

Metal Post + GRADIA CORE

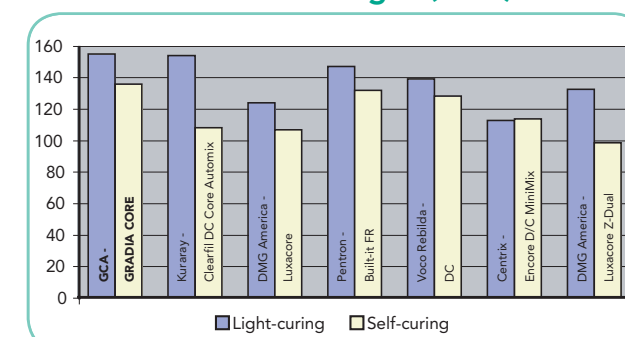
Cast Core

Compressive Strength (MPa)



Data on file, measured by GC R&D

Flexural Strength (MPa)



Data on file, measured by GC R&D

Physical Properties - GRADIA CORE

Flexural Strength (MPa)	154.1 (16.8)
Modulus of Elasticity (MPa)	10.8 (0.6)
Compressive Strength (MPa)	273.0 (16.7)
Depth of Cure (mm)	2.9 (0.1)
Curing Time/LED	10 sec
Radiopacity	268%
Bond Strength to Enamel (MPa)	21.6 (3.3)
Bond Strength to Dentin (MPa)	21.7 (2.2)
Bonding Agent	Self-Etching Bond

Data on file



1) Spazzin AO, et al. Influence of post and resin cement on stress distribution of maxillary central incisors restored with direct resin composite. Oper Dent. 2009;34(2):223-9. 2) Grandini S, et al. Fatigue resistance and structural integrity of different types of fiber posts. Dent Mater J. 2008;27(5):687-94. 3) Hattori M, et al. Fatigue Properties of Fiber-reinforced Post and Resin Core Build-up Materials. IADR 2009, Miami, FL. Abstract 1913. 4) Ferrari M, et al. Microtensile strength and micromorphological aspects of post-core interfaces. IADR 2005, Baltimore, MD. Abstract 1655. 5) Goracci C, et al. Light-transmitting ability of marketed fiber posts. J Dent Res. 2008;87(12):1122-6.