

Competitive Product and Procedure Comparison

3M™ RelyX™ Fiber Post 3D

Glass Fiber Post

Offered by 3M



LuxaPost

Glass Fiber Post

Offered by DMG America



Summary – Advantages of 3M Solution over DMG

- Faster and simpler 3M post and core solution with proven products (Fig. 1)
- Reliable post and core build-up procedure with fewer clinical steps and fewer products (Fig. 1)
- Easier cementation with 3M™ RelyX™ Unicem 2 Automix Cement: no post silanating, no root canal conditioning, no application of cement to post, no lentulo usage (endo tip application of RelyX Unicem 2 Automix enables a virtually void-free cementation (Fig 1.))
- Easier bonding with 3M™ Scotchbond™ Universal Adhesive for the core build-up: No etching or priming (Fig. 1)

3M post and core solution compared to DMG

	Post cementation							Core build-up				
	Apply etching gel	Apply primer	Mix adhesive	Apply adhesive	Condition post	Apply cement	Place post and cure	Apply etching gel	Apply primer	Mix adhesive	Apply adhesive	Core build-up
3M	-	-	-	-	-			-	-	-		
DMG		-			-							

Fig. 1: Less components and steps compared to LuxaPost & LuxaCore System. Source: Steps according to instructions for use of LuxaPost, LuxaCore and 3M™ RelyX™ Fiber Post 3D.

RelyX Fiber Post 3D – Major features

- No pre-treatment of the post needed due to the micro-porosity at the surface (Fig. 2)
- Integrated 3D macro retention in the coronal part for a high bond strength to the core build-up (Fig. 3)
- Excellent radiopacity for better post position control (Fig. 4)

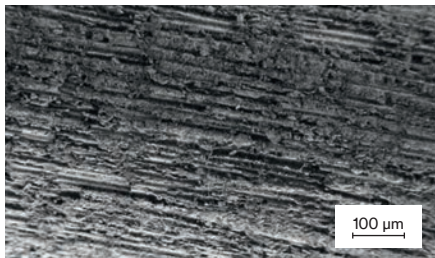


Fig. 2: Surface (SEM, 200x magnification) of 3M™ RelyX™ Fiber Post 3D.

Source: R. Peez, R. Hampe, S. Hader, E. Popp, J. Edgington: Evaluation of a New Cement Post and Core Procedure System, J Dent Res 94 (Spec Iss A): 0105, 2015, (www.dentalresearch.org).

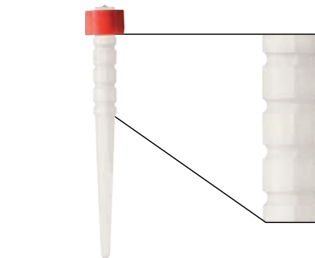


Fig. 3: The coronal macro retention of 3M™ RelyX™ Fiber Post 3D give a high and secure mechanical retention to the core build-up material, immediate depth control and guidance for post shortening.

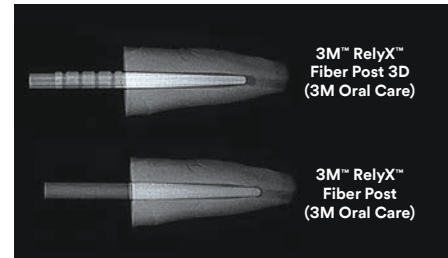


Fig. 4: Comparative radiography of both posts. Source: THE DENTAL ADVISOR, Research Report Number 70 – June 2015.

3M™ RelyX™ Fiber Post 3D Glass Fiber Post

Offered by 3M



LuxaPost Glass Fiber Post

Offered by DMG*



Product description and benefits:

(As stated by the
manufacturer)

Glass fiber reinforced composite post with uniquely designed coronal macro-retention. Embedded in a fast and simple 3M post and core solution for a secure bond from root to core.

Glass fiber reinforced composite post with a similar flexural modulus to LuxaCore Z and natural dentin.

Cement



3M™ RelyX™ Unicem 2 Automix Cement

- Self-adhesive universal resin cement, no need for etching, priming and bonding
- Reduces significant number of steps
- Endo tip allows easy and virtually void-free application
- Delivers reliable and strong bond of post to root canal

LuxaCore Z

- Excellent flow properties
- With zirconium dioxide and nanotechnology
- Excellent flow properties which guarantee optimum adaptation to the shape of cavity walls and posts
- Film thickness of just 20 µm

Post



3M™ RelyX™ Fiber Post 3D

- High mechanical retention to core due to coronal macro retention
- Secure bond in the root canal due to superficial micro-porosity
- High radiopacity
- Dentin-like elasticity to avoid root fracture
- Esthetic alternative to metal posts
- The flattened coronal macro retention offer a safe grip with the tweezer

LuxaPost

- 2 tiny coronal retention grooves
- Pre-silanzised
- Radiopaque
- Dentin-like flexural modulus: reduced risk of root fracture

Adhesive



3M™ Scotchbond™ Universal Adhesive

- Light-curing, self-adhesive
- Reliable and strong bond to root and core
- Bonds to all surfaces including enamel, dentin, glass ceramic, zirconia, noble and non-precious alloys, and composites – without additional primer
- One application of adhesive sufficient (no etching or priming)
- Combined total-etch, self-etch and selective-etch adhesive

LuxaBond-Total Etch

- (LuxaBond Pre-Bond & LuxaBond Adhesive A+B)
- Dual-curing (Hardens even without light)
 - No premature polymerization of bonding »pools«
 - Compatible with self-curing and dual-curing materials: Suitable for all applications with LuxaCore
 - Pre-Bond facilitates quicker curing of the bond mix in the dentin for superior retention
 - Easy root canal application with special endo brushes
 - Does not contain acetone

Core build-up



3M™ Filtek™ One Bulk Fill Restorative

- Improved opacity and esthetics
- Excellent cavity adaptation
- One-step placement up to 5 mm
- Excellent handling and sculptability
- Excellent wear resistance and polish retention
- High radiopacity

LuxaCore Z

- Excellent flow properties
- Extremely high compressive strength
- Cuts like dentin

How it works

- Clean RelyX Fiber Post 3D with alcohol
- Apply RelyX Unicem 2 Automix Cement into root canal
- Insert post into root canal
- Apply Scotchbond Universal Adhesive to the coronal part of post and tooth
- Build-up core with Filtek One Bulk Fill Restorative

- Clean post with alcohol
- Apply LuxaBond Pre-Bond into root canal
- Mix LuxaBond Adhesive A and LuxaBond Adhesive B
- Apply the mixture of LuxaBond A and LuxaBond B into root canal
- Apply cement into root canal
- Insert post into root canal
- Mix LuxaBond Adhesive A and LuxaBond Adhesive B
- Apply the mixture of LuxaBond to post and tooth
- Build-up core with LuxaCore Z



*Information obtained from <http://www.dmg-dental.com/products/>

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