

Cementation Solutions

# RelyX™ Unicem

Self-Adhesive Universal Resin Cement

# RelyX™ Fiber Post

Glass Fiber Post



Trust in  
universal strength

**3M** ESPE

# 3M ESPE – the leading provider of cementation solutions.

You + 3M ESPE =  
New ideas for dentistry

Expertise you can rely on: 3M™ ESPE™ is renowned for its dedication to quality, and our innovative products have always set standards in dentistry. So play it safe – trust the world market leader and its successful portfolio of permanent and temporary cements.

## RelyX™ Unicem Self-Adhesive Universal Cement – a truly universal partner in your dental practice.

Dentists have put their trust in RelyX™ Unicem Self-Adhesive Universal Resin Cement by 3M ESPE for many years. With more than 35 million applications and a multitude of awards, this universally applicable cement has rightly emerged as the worldwide “gold standard” for self-adhesive cementation.

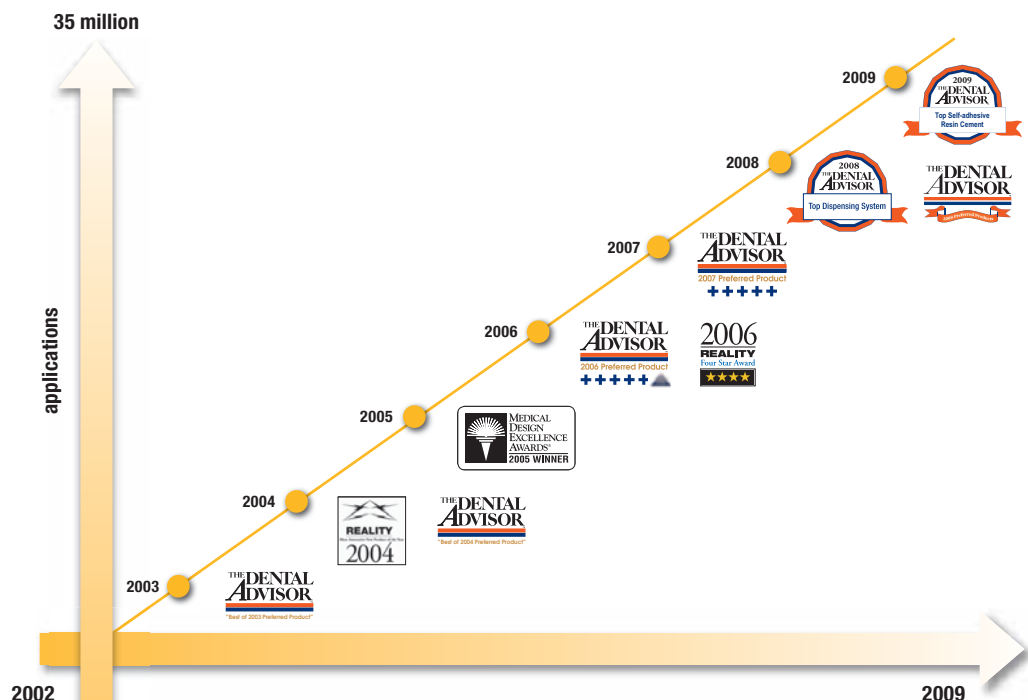
The self-adhesive dual-cure resin cement RelyX Unicem – available in the convenient Clicker™ Dispenser and in the Aplicap™ or Maxicap™ Capsule – combines all the key characteristics of a high-performance cement in a single product: it provides easy handling without preparative tooth treatment (such as etching and priming) and is ready to use immediately. Plus, there’s the feature that matters most: RelyX Unicem cement achieves a strong and reliable bond.



#1 worldwide  
with more than 35 million applications!

## Top ratings for years – a unique success story.

RelyX Unicem cement has earned numerous distinctions from the specialist press, including six consecutive 5-plus ratings from The Dental Advisor – the best rating possible. In total, the collection adds up to an impressive 30 plus.



## It's just as simple as it looks.

Only five steps to a perfect cementation: apply the ready-mixed cement directly in the restoration or cavity, place the restoration, remove any overflow, light-cure (or allow to self-cure), and finally finish and polish. Time-consuming treatment steps – such as etching, priming and bonding – are unnecessary.

### Cementing steps with RelyX™ Unicem Cement\*.



1. Apply cement in the restoration or cavity (direct application with Aplicap™/Maxicap™ Capsule system possible). 2. Place the restoration. 3. Remove excess. 4. Light-cure or allow to self-cure. 5. Final restoration.

\* Pre-treatment of restoration according to manufacturer's recommendation.

**!** Indicated for virtually all indications\*\*:

- Inlays
- Onlays
- Crowns
- Bridges
- Endodontic posts

\*\* For veneers, use RelyX™ Veneer Cement from 3M ESPE.

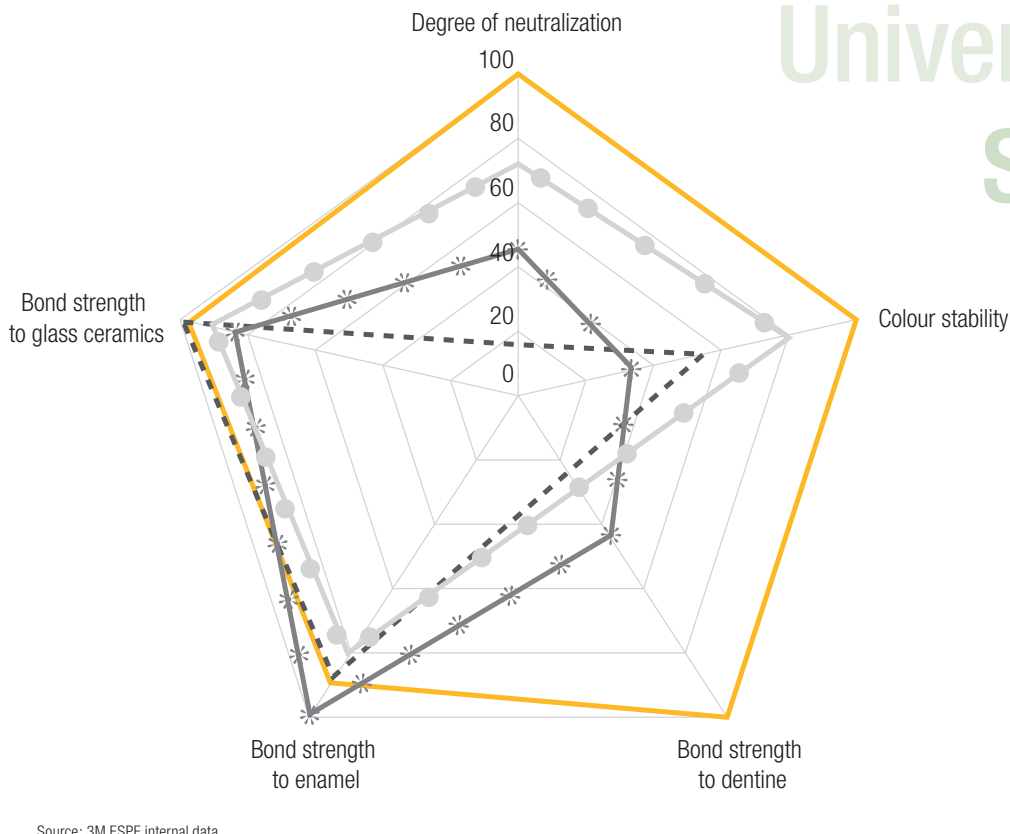
# Convenience

## Proven universal strength.

RelyX Unicem cement is strong where it counts and shows its strengths in direct comparison with the competition. Compared with other leading cements, RelyX Unicem cement provides convincing results, with optimum values for the following clinically relevant features:

- **Excellent bond strength on various materials** (dentine, enamel and glass ceramic are shown)
- **Excellent colour stability**
- **Highest degree of neutralization (pH value) after 24 hours**

# Universal strength



Source: 3M ESPE internal data



**Provides a reliable and strong bond to:**

- Metal/PFM
- Porcelain/ceramic
- Alumina & zirconia (e.g. Lava™ Restorations)
- Composite
- All chairside CAD/CAM block materials

In the course of the test, the materials were alternately immersed in hot and cold water baths 10000 times. After only 5000 thermocycles (TC), the competing cement Maxcem Elite™ exhibited distinct microdegradation. After 10000 cycles both Maxcem Elite and G-Cem™ showed cracking.

## More stable than the competition: the pH value makes the difference.

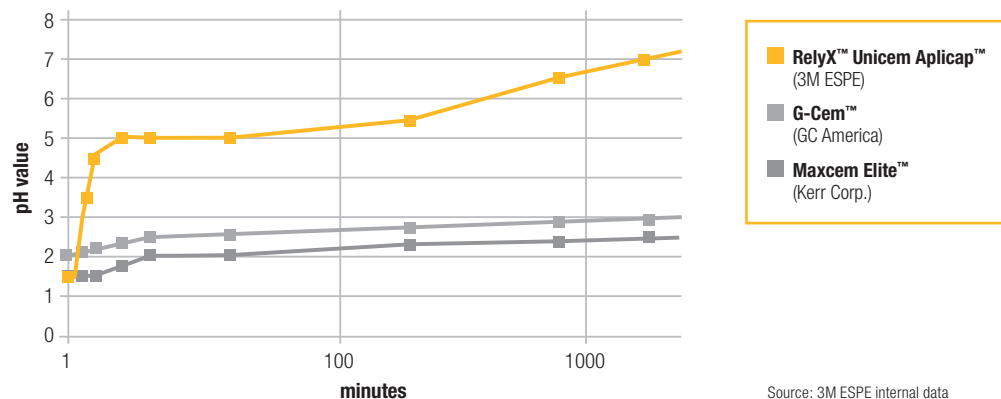
Results of thermocycling stress tests on self-adhesive resin cements show that **RelyX™ Unicem Cement remains intact, while G-Cem™ and Maxcem Elite™ show obvious cracking.**

RelyX Unicem's unique chemical formulation raises its pH value to a neutral level of 7 after application. This contributes to the material becoming hydrophobic, making it more able to resist water uptake and more stable over time.



Results of thermocycling stress test on self-adhesive resin cements.  
Source: 3M ESPE internal data

# Long-term stability



Source: 3M ESPE internal data







## High patient comfort, low post-operative sensitivity.

Pain is undoubtedly what patients hate and fear most, whether it occurs during or after treatment. With RelyX™ Unicem Cement, you can save them from later discomfort, as it shows virtually no risk of post-operative sensitivity.

# Patient comfort

## Outstanding aesthetics.

In addition to its bond strength and easy handling, your patients will enjoy the high colour stability of RelyX Unicem cement. Compared to competing cements, RelyX Unicem shows the least amount of discolouration after 3 days immersed in a coffee solution at 36°C.

	before	after
<b>RelyX™ Unicem</b>		
<b>G-Cem™</b>		
<b>Maxcem Elite™</b>		

Test specimen after 3 days immersed in coffee at 36°C (tested colour shades: A2 or yellow).  
Source: 3M ESPE internal data

### ! Key features at a glance:

- For permanent cementation of all types of ceramics, composites and metal\*\*
- High bond strength
- No etching, priming or bonding required
- Self-adhesive, aesthetic, moisture-tolerant
- Low post-operative sensitivity
- Clinically proven: years of data, independent university studies and opinion leader testing available
- Convenient handling and hygienic, exact dosage with the Aplicap™/Maxicap™ Capsule or Clicker™ Dispenser

\*\* For veneers, use RelyX™ Veneer Cement from 3M ESPE.

## What dentists are saying.

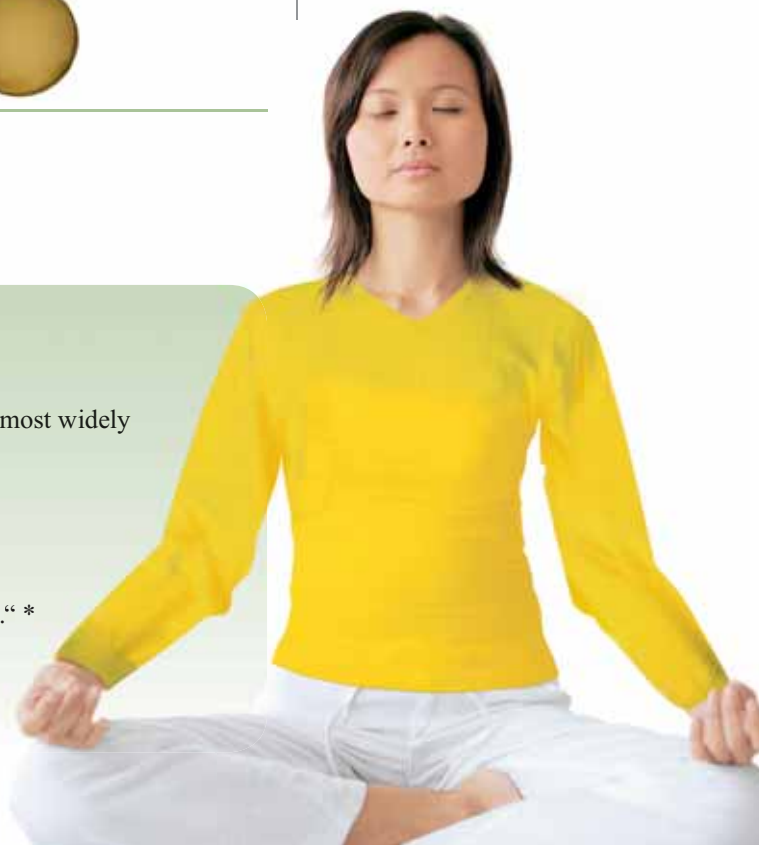
“After five years of use, RelyX™ Unicem continues to be the most widely used cement in our office.“ \*

“Simple cement for fibre posts.“ \*

“Very mild cement with little sensitivity at cementation.“ \*

“Quick, easy to use, easy to clean, and very reliable outcome.“ \*

\* THE DENTAL ADVISOR; May 2008, Vol. 25, No. 4. To view the full report, visit [www.dentaladvisor.com](http://www.dentaladvisor.com)





## RelyX™ Unicem Cement & RelyX™ Fiber Post – designed to make excellent clinical results easier to achieve.

**With the RelyX Unicem system, cementing a post is faster, easier and more reliable.**

The tried and true RelyX™ Unicem Aplicap™, with its unique Elongation Tip, is designed to reach into the root canal, so you can apply cement in the canal from bottom to top.

This greatly reduces the chance of air pockets and voids, resulting in outstandingly strong and virtually void-free post cementation. Convenience and reliability...without compromise.

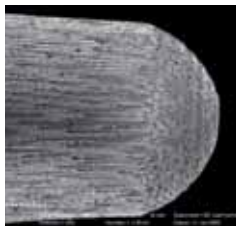


# Easy

### Why switch from metal to fibre posts?

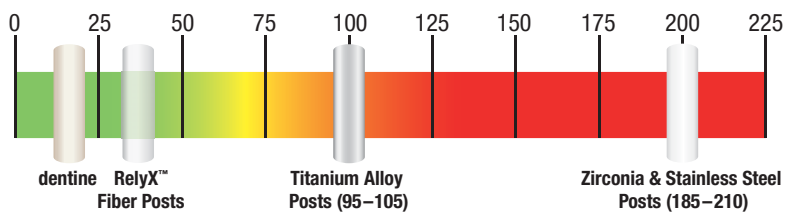
Clinical research proves that the elasticity of RelyX Fiber Post is far more similar to that of human dentine than is the elasticity of metal and ceramic posts – which means a much lower risk of root fracture due to the “wedge effect”.

If endodontic re-treatment is required, it is reassuring to know that RelyX Fiber Posts can be removed easily, without damaging the tooth.



SEM photo shows fibres and microporous surface.

Source: 3M ESPE internal data

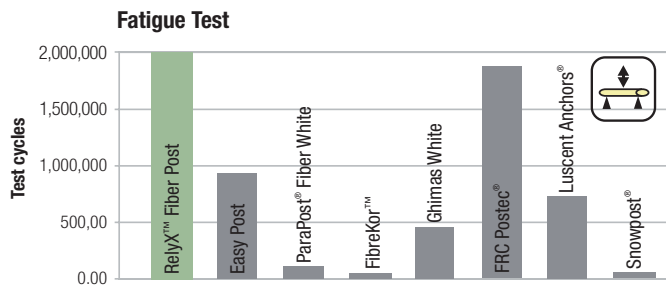


Elasticity modulus (gpa) of dentine and post materials

Source: 3M ESPE internal data

## Why choose RelyX™ Fiber Posts? Because they are strong and long-lasting.

RelyX Fiber Post's unique resin composition and equally dispersed parallel fibres lead to superior mechanical strength. The microporous surface allows for additional bond strength because of microretentive effects.



Only RelyX™ Fiber Post showed no failures after 2 million cycles in the fatigue test (three-point bending cycles until fracture, depicted is the statistical average from tests on 10 posts).

Source: Prof. M. Ferrari, University of Siena, Italy

# Reliable

## Translucent and radiopaque.

The excellent light translucency of RelyX Fiber Post permits efficient light cure deep into the root canal. Its improved radiopacity is among the highest of available glass fibre posts.



Light translucency of RelyX™ Fiber Post (size #2), here with the Elipar™ FreeLight 2 LED Curing Light.

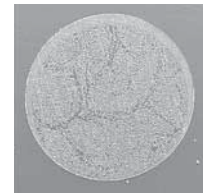
Source: 3M ESPE internal data



The improved radiopacity of RelyX™ Fiber Post (size 2) makes future diagnosis easier.

Source: THE DENTAL ADVISOR, Research Report 20, 2009

To view the full report, visit [www.dentaladvisor.com](http://www.dentaladvisor.com)



SEM images of a simulated root canal filled with RelyX™ Unicem Cement using the RelyX™ Unicem Aplicap™ Elongation Tip.

## It's your choice.

No matter which dispensing method you prefer, RelyX™ Unicem Cement stands for first-rate adhesion, high physical strength, low linear expansion and excellent marginal integrity.

### Aplicap™ Capsule

- Ideally suited for inlays, onlays, crowns and posts
- Hygienic unidose
- Consistent mix with triturator
- RelyX™ Unicem Aplicap™ Elongation Tip for virtually void-free cementation of posts
- Working time: 2:00 min



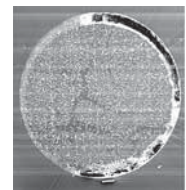
### Maxicap™ Capsule

- Ideally suited for multiple-unit bridges
- Hygienic unidose
- Consistent mix with triturator
- Working time: 2:30 min



### Clicker™ Dispenser

- Suited for all sizes of restorations
- Choose amount dispensed – 11 g dispensed in 80 clicks (approx. 40 applications)
- Time-saving, easy and hygienic handling
- Delivers pre-measured doses for consistent and economical mixing
- No need for mixer, activator, applicators, mixing tips or other devices



Resin cement applied using a common method\* of applying cement to posts before placement. Voids, which can compromise bond strength, are visible as dark spots at the top of the image.

Source: Naumann M., Watzke R., University of Berlin, Charité

\*The use of Lentulo spirals is contraindicated for many resin cements because it may significantly decrease setting time.

# Highly praised and proven in 6 years of clinical experience.



With results like these, RelyX™ Unicem Cement has earned its No.1 position.

In multiple clinical studies and millions of practical applications, RelyX Unicem has proven itself to be a product you can trust in. It has been thoroughly tested in a range of *in vitro* and *in vivo* studies, which have repeatedly revealed its strengths and benefits.



## Ordering Information

### Item No. Product Information

**RelyX™ Unicem Self-Adhesive Universal Resin Cement – Clicker™ Dispenser**

#### Single Packs

- 56838** 1 Clicker™ Dispenser 11 g\*, shade Translucent, 1 mixing pad
- 56837** 1 Clicker™ Dispenser 11 g\*, shade A2 Universal, 1 mixing pad
- 56836** 1 Clicker™ Dispenser 11 g\*, shade A3 Opaque, 1 mixing pad

#### RelyX™ Unicem – Aplicap™ Capsule

- 56828** **Trial Pack** 20 Aplicap™ Capsules assorted in the shades A2 Universal (10), Translucent (6), A3 Opaque (4)
- 56829** **Trial Kit** 20 Aplicap™ Capsules assorted in the shades A2 Universal (10), Translucent (6), A3 Opaque (4), Aplicap™ Activator, Aplicap™ Applier
- 56814** **Intro Kit** 50 Aplicap™ Capsules assorted in the shades A2 Universal (24), Translucent (16), A3 Opaque (10), Aplicap™ Activator, Aplicap™ Applier

#### Refills

- 56815** 50 Aplicap™ Capsules assorted in the shades A2 Universal (24), Translucent (16), A3 Opaque (10)
- 56816** 50 Aplicap™ Capsules, shade Translucent
- 56817** 50 Aplicap™ Capsules, shade A3 Opaque
- 56818** 50 Aplicap™ Capsules, shade A2 Universal
- 56819** 20 Aplicap™ Capsules, shade A1
- 56820** 20 Aplicap™ Capsules, shade White Opaque

#### RelyX™ Unicem – Maxicap Capsule

- 56830** **Intro Kit** 20 Maxicap™ Capsules assorted in the shades A2 Universal (10), Translucent (6), A3 Opaque (4), Maxicap™ Activator, Maxicap™ Applier

### Item No. Product Information

#### Refills

- 56831** 20 Maxicap™ Capsules assorted in the shades A2 Universal (10), Translucent (6), A3 Opaque (4)
- 56832** 20 Maxicap™ Capsules, shade Translucent
- 56833** 20 Maxicap™ Capsules, shade A3 Opaque
- 56834** 20 Maxicap™ Capsules, shade A2 Universal

#### RelyX™ Fiber Post

- 56860** **Intro Kit** Box with 5 posts of each size: 1 (1.3 mm dia), 2 (1.6 mm dia), 3 (1.9 mm dia); 4 drills sizes 1, 2, 3, 1 universal drill, 20 Elongation Tips
- 56868** **Combination Kit** Box with 5 posts of each size: 1 (1.3 mm dia), 2 (1.6 mm dia), 3 (1.9 mm dia); 4 drills sizes 1, 2, 3, 1 universal drill, 20 Elongation Tips 20 Aplicap™ Capsules assorted in the shades A2 Universal (10), Translucent (6), A3 Opaque (4), Aplicap™ Activator, Aplicap™ Applier

#### Refills

- 56872** 10 RelyX™ Fiber Posts size 0 (1.1 mm dia)
- 56861** 10 RelyX™ Fiber Posts size 1 (1.3 mm dia)
- 56862** 10 RelyX™ Fiber Posts size 2 (1.6 mm dia)
- 56863** 10 RelyX™ Fiber Posts size 3 (1.9 mm dia)
- 56873** 1 drill size 0 (1.1 mm dia)
- 56864** 1 drill size 1 (1.3 mm dia)
- 56865** 1 drill size 2 (1.6 mm dia)
- 56866** 1 drill size 3 (1.9 mm dia)
- 56867** 1 universal drill
- 77550** 10 RelyX™ Unicem Aplicap™ Elongation Tips

\* Dispensed in 80 clicks (approx. 40 applications)



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You + 3M ESPE =  
 New ideas for dentistry

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