



99%
rating at
recall

3M

www.3M.com/dental

Description:

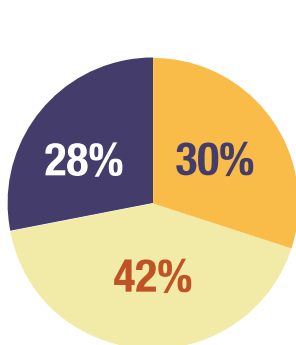
RelyX Ultimate Adhesive Resin Cement is an adhesive resin cement available in a dual-barrel syringe with mixing tips for easy mixing and dispensing. Used in conjunction with *Scotchbond Universal Adhesive*, it results in high bond strength to both enamel and dentin – measured to be over 30 MPa by THE DENTAL ADVISOR. **RelyX Ultimate Adhesive Resin Cement** includes a component that activates the self-cured function of the bonding agent and eliminates the need for an additional dual-cure activator. *Scotchbond Universal Adhesive* also functions as a primer for silica-based ceramics, composite, zirconia and metal substrates. It can be used with total-etch, selective-etch or self-etch bonding techniques. The combination can be used for cementing silica-based ceramic (glass ceramic), zirconia, and PFM and composite restorations including fiber posts. **RelyX Ultimate Adhesive Resin Cement** is available in Translucent, B 0.5 (Bleach), A1 and A3 Opaque shades.



Clinical Evaluation Protocol:

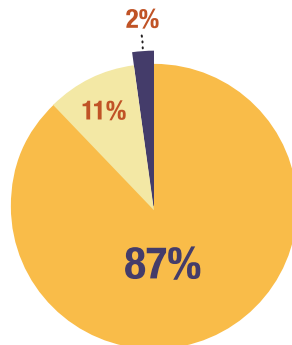
A total of 2126 restorations were placed over a five-year period beginning in January 2012 using **RelyX Ultimate Adhesive Resin Cement** and *Scotchbond Universal Adhesive*. This included 222 pre-existing restorations that had previously been cemented using a different cement and were recemented with **RelyX Ultimate Adhesive Resin Cement**. At five years, 1532 restorations had been recalled (Figure 1). The recalled restorations consisted of 1331 crowns, and 173 three- to five-unit bridges. The remaining restorations consisted of inlays, onlays, veneers and bridges (Figure 2). Sixty-three percent of the restorations were in molars, 25% in premolars and 12% in the anterior region (Figure 3). The vast majority of the restorations were zirconia and silica-based ceramic restorations, with the remainder being ceramic-metal restorations (Figure 4).

Fig. 1: Age of restorations evaluated at five-year recall.



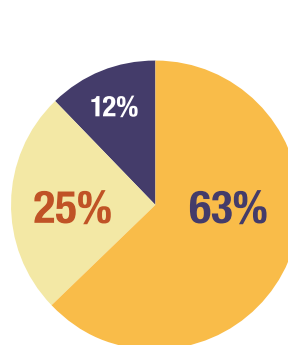
0-2 years
2-4 years
Over 4 years

Fig. 2: Distribution of restorations recalled at five years.



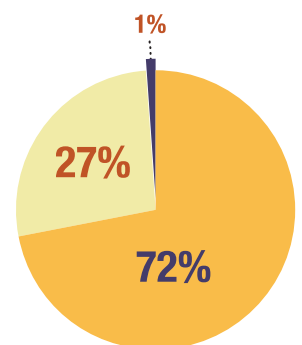
Crowns
3- to 5-unit bridges
Inlays, onlays, veneers, interim bridges

Fig. 3: Distribution of teeth bonded with 3M™ RelyX™ Ultimate Adhesive Resin Cement.



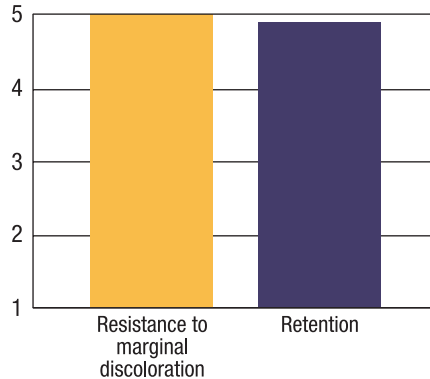
Molars
Premolars
Anterior region

Fig. 4: Types of restorative materials bonded with 3M™ RelyX™ Ultimate Adhesive Resin Cement.



Zirconia
Silica-based ceramic
Ceramic-metal

Fig. 5: Results of **3M™ RelyX™ Ultimate Adhesive Resin Cement** at five years.



Results at 5 years:

Fifteen hundred and thirty-two restorations (72% of the total number of restoration placed) were recalled by year five and were evaluated in the following areas: resistance to marginal discoloration and retention. Restorations were evaluated on a 1-5 rating scale: 1= poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent.

Resistance to Marginal Discoloration

Resistance to marginal discoloration was rated excellent (Figure 5). Only 19 restorations received a rating lower than 5. Nine had very slight discoloration and received a rating of 4. Of the remaining 10 restorations, six were replaced due to tooth failures and the remaining four were replaced because they received a rating of 2. Even so, the majority of the restorations received a rating of 5.0 at the five-year recall period.

Retention

Retention was rated excellent (Figure 5). During the five-year recall period, 26 of 1532 restorations debonded (1.7% debond rate). Of the 26 debonded restorations, nine of the debonds were associated with tooth failures not related to the cement. The remaining 17 restorations that debonded were recemented with **RelyX Ultimate Adhesive Resin Cement**. Overall, the retention rate was high (98%), attesting to the high bond strength of the cement to both restorative materials and tooth structure.

Summary

Over a five-year period, the clinical performance of **RelyX Ultimate Adhesive Resin Cement** used with **Scotchbond Universal Adhesive** was excellent, based on the ratings for resistance to marginal discoloration and retention. At five years, **RelyX Ultimate Adhesive Resin Cement** received a clinical performance rating of 99%.

Consultants' Comments

- "I've been using **RelyX Ultimate Adhesive Resin Cement** for five years and have not been disappointed."
- "**RelyX Ultimate Adhesive Resin Cement** is my go to cement since its introduction."
- "I love using **RelyX Ultimate Adhesive Resin Cement** for cementing metal and fiber posts, because 3M has a nice extension for the syringe to fill the canal."
- "Flash cure for only two seconds to make clean up easier; otherwise, removal of excess cement is time consuming."