

# 3M™ Ketac™ Cem Plus

Resin Modified Glass Ionomer Cement  
SIX-YEAR CLINICAL PERFORMANCE



www.dentaladvisor.com

RATING SYSTEM: Excellent + + + + Very Good + + + Good + +

98%  
rating at  
recall

3M

www.3M.com/dental

**Ketac™ Cem Plus Cement** is a radiopaque, fluoride-releasing, resin-modified glass ionomer luting cement. It is delivered in a dual-barrel syringe with mixing tips for easy mixing and dispensing and is available in a white shade. It is self-curing with an option for tack curing for easy removal of excess cement. **Ketac Cem Plus** is also available in both Automix and Clicker formats.

### Clinical Evaluation Protocol:

A total of 116 restorations were placed over a six and a half year period between January 2011 and June 2017 using **Ketac Cem Plus**, of which 100 have been recalled. Of the recalled restorations, 25 were in place for up to 3 years, 61 for between 3 and 5 years, and 14 for between 5 and 7 years (Figure 1).

Figure 1. Age of restorations cemented with **Ketac Cem Plus** at recall.

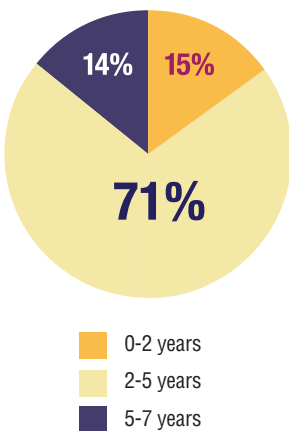
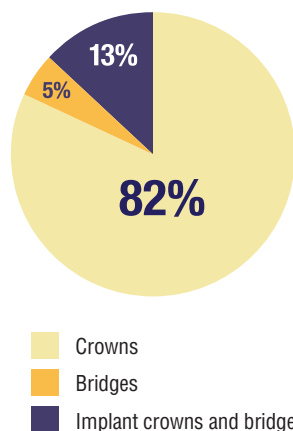


Figure 2. Classification of restorations cemented with **Ketac Cem Plus**.



The recalled restorations consisted of 91 crowns including 9 implant crowns and 9 three-unit bridges including 4 implant bridges (Figure 2). Eighty-two percent of the restorations were in the molar region, 17% were in the premolar region and 1% in the anterior region (Figure 3). The vast majority were zirconia and porcelain-fused-to-zirconia (PFZ) restorations. The remaining restorations were gold, porcelain-fused-to-metal and lithium disilicate.

### Results at 6 years:

#### Results at Recall

One hundred restorations (85% of the total number placed) had been recalled and were evaluated in the following areas: resistance to marginal discoloration, esthetics, 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 staining was rated as excellent - 97 of 100 restorations received a rating of 5 (Figure 4). Of the remaining three restorations, one had marginal caries and two had marginal discoloration.

#### Esthetics

Esthetics was rated as excellent, with 99 restorations receiving a 5 and one restoration receiving a 4 (the restorative material was slightly dull) (Figure 4).

#### Retention

Retention was rated as excellent (Figure 4). During the recall period, 3 of 100 restorations debonded. However, one debond occurred while an elevator was being applied to an adjacent tooth. Two debonds occurred spontaneously. All three restorations were recemented.

Figure 3. Distribution of restorations cemented with **Ketac Cem Plus** by site.

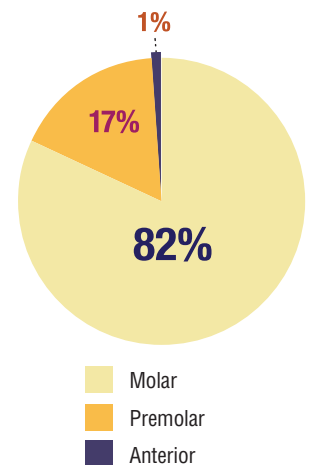
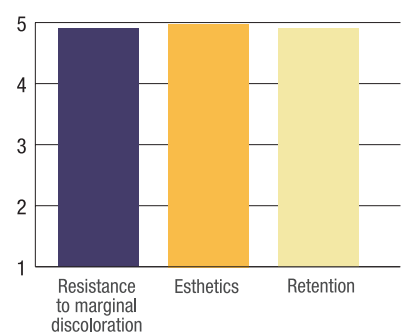


Fig. 4. Clinical results of restorations cemented with **Ketac Cem Plus** at recall.



### Consultants' Comments

- "Easy clean-up during the gel stage."
- "No post-operative sensitivity."

"BEST ALL-AROUND POSTERIOR CROWN CEMENT."

### Summary

Over a six and one half year period, clinical performance of restorations cemented with **Ketac Cem Plus** was rated as excellent. **Ketac Cem Plus** received a clinical performance rating of 98%.