

CLEARFIL™ SE BOND – 8 year clinical report

References

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8 YEAR CLINICAL REPORT

CLEARFIL™ SE BOND – Excellent 8 year clinical performance



CLEARFIL™ SE BOND – 8 year clinical report

Outstanding 8 year clinical performance

CLEARFIL™ SE BOND is a light-curing, two-step self-etching adhesive consisting of a self-etching primer and a bonding agent. Ten years have passed since its launch, and CLEARFIL™ SE BOND has become one of the most reliable products on the market. It is generally recognized as a **Golden Standard** for self-etching products.

The outstanding results of a study conducted by Prof. B. Van Meerbeek et al⁽¹⁾ were recently released. After 8 years, the clinical effectiveness was still excellent (97% retention rate), with selective acid-etching of the enamel margins only having some minor effects on secondary clinical parameters (Figure 1).

KULeuven-based/coordinated CLINICAL RESEARCH PROGRAM to assess the clinical effectiveness of adhesives

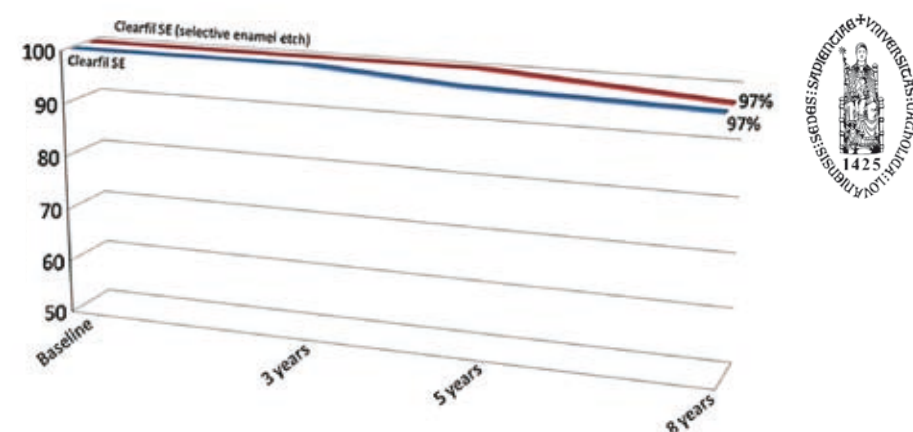


Figure 1 – Graph representing the retention rate of Class-V restorations up to 8 years of clinical service for a 2-step self-etch adhesive with and without selective phosphoric acid etching of enamel [2,3]. This study is conducted at the Catholic University of Leuven in Belgium (KULeuven). Be aware that the retention rate (in the Y-axis) starts at 50%.

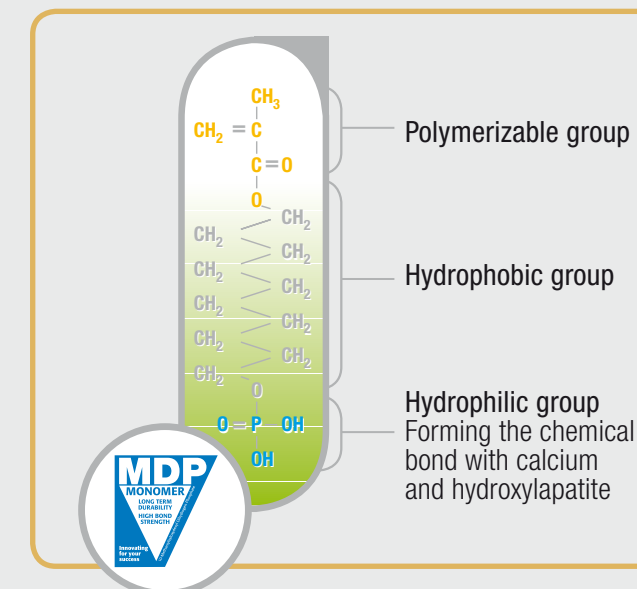
Reasons for excellent performance

The acidity of the self-etching primer is at an optimum level and thus allows the simultaneous treatment of both enamel and dentin layers in one step. This enables significant etching of the enamel cavity wall in order to ensure good bonding. Regarding the enamel bonding, etch-rinse systems rely only on the mechanical interlock using the phosphoric acid. Generally speaking, the etching

property of self-etching bonding systems is milder compared to etch rinse systems. On the other hand, CLEARFIL™ SE BOND contains MDP which creates a strong chemical bond with the hydroxylapatite in addition to the mechanical interlock. That is why CLEARFIL™ SE BOND shows such excellent long-term clinical results without selective etching.

Furthermore, the primer of CLEARFIL™ SE BOND does not excessively damage the collagen structure of the dentin cavity wall. Thanks to the low technique sensitivity of the self-etching primer and the high sealing ability of the bonding agent, CLEARFIL™ SE BOND is able to provide excellent long-term clinical results.

Figure 2 is also taken from the study by Prof. B. Van Meerbeek et al. CLEARFIL™ SE BOND is categorized as 2-step self-etch (mild/intermediately strong), and its annual failure rate (%) is at the lowest level among the listed bonding categories. [* Glass ionomer cement is not often used for Class-V restorations. Glass ionomer cement displays a good bonding performance, but it is obvious that a composite resin restoration provides better wear resistance, less water sorption, and less discoloration compared to glass ionomer cement].



Annual failure rate (%)

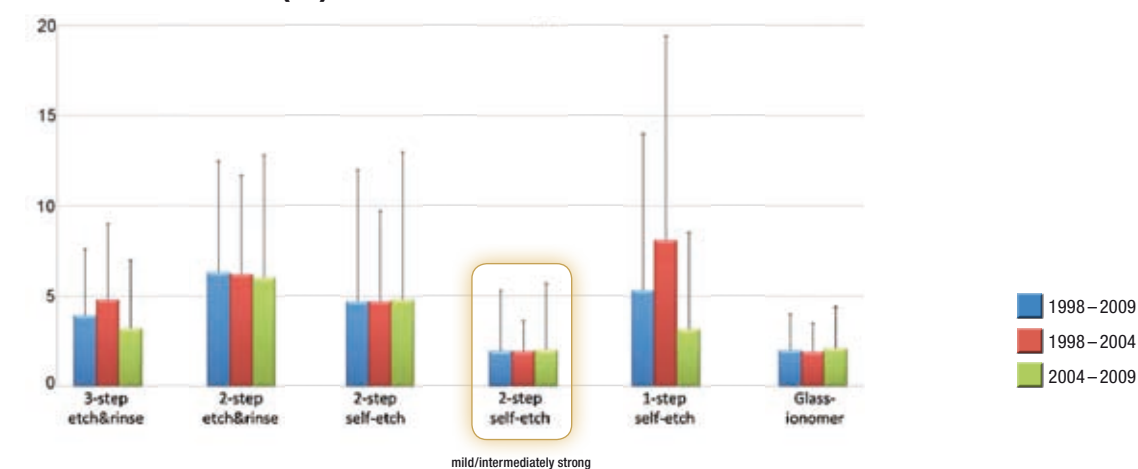


Figure 2 – Graph representing the mean annual failure rates per adhesive class, determined according to a systematic review of Class-V clinical trials of adhesives during the period 2004–2009 [4], in continuation of the earlier conducted review during the period 1998–2004 [5]. The overall mean annual failure rates per adhesive class for the total 10-year review period (1998–2009) are mentioned as well.