

Heraeus Dental Science

Scientific Information Signum zirconia bond

Zirconia is a well established material in the dental field and is used for several indications. The application ranges from framework material over monolithic veneers to fully anatomical crowns and bridges. Is there a positive effect for using zirconia bonders before adhesive cementation?

Comparison of the shear bond strength of various zirconia bonding systems before adhesive cementation of zirconia.

Purpose

The objective of this in-vitro research is to determine the influence of various bonders for zirconia on the shear bond strength in the context of adhesive cementation.

Material & Method

The following bonders were examined: **Monobond-S (Ivoclar)**, **Clearfil Ceramic Primer (Kuraray)** and **Signum zirconia bond (Heraeus Kulzer)**. Resin cement used: **Panavia F 2.0 (Kuraray)**. For the control measurement only the resin cement was used, for all of the other measurements composite blocks (**Filtek Z250, 3M ESPE**) were cemented on zirconia, the zirconia samples were prepared with Al_2O_3 (grit size of $110\mu m$ with 2,8 bar) and conditioned with the named bonders.

Conclusion

Signum zirconia bond secures the highest shear bond strength by conditioning the adhesive surface before cementation of zirconia.

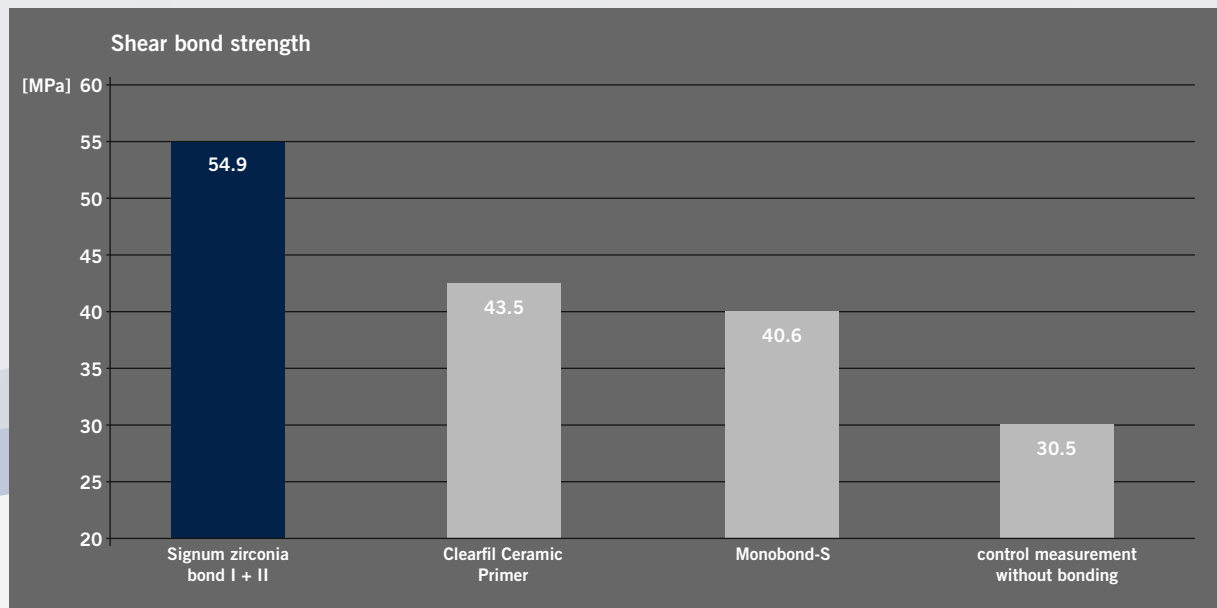
Source:

Determination of Resin Bond Strength to Zirconia Ceramic Surface Using Different Primers

CA_ GRI URAL, TOLGA KÜLÜNK, ŞAFAK KÜLÜNK, MURAT KURT & SENIHA BABA

Department of Prosthodontics, Faculty of Dentistry, Ondokuz Mayıs University Samsun, Turkey

Results



Classification [%] of the surface after shearing

Group	Adhesive	Cohesive	Adhesive + cohesive
Signum zirconia bond I+II	20	60	20
Clearfil Ceramic Primer	30	50	20
Monobond-S	40	40	20
Control measurement without bonding	60	30	10