Cementing Zirconia Crowns – Best Cement

This is a common question that has created plenty of controversy.

What are some of the best cements to use when cementing zirconia crowns? I would like to use a cement that achieves a bond to the zirconia as well as the tooth. Thanks. ■ Mitch

Eric Krause, DMD
“Eric Krause”
Posted: 3/26/2010 • Post: 2 of 27

Nothing bonds to the zirconia. Best results I’ve seen in the lab have been to sandblast with 50 micron aluminum oxide, then place Surpass 2 and dry, Surpass 3 thin and cure. ■

“uscdds95”
Posted: 3/26/2010 • Post: 3 of 27

I like Unicem. ■

“kclarke22”
Posted: 3/26/2010 • Post: 4 of 27

Never had trouble with FugiCEM. Love the stuff! ■

“mitche”
Posted: 3/27/2010 • Post: 5 of 27

I have been noticing claims by various manufacturers that their cements “bond” to zirconia. One example is VOCO America (Bifix SE).

What are your opinions here? Thanks. ■

“Aristotle”
Posted: 3/29/2010 • Post: 8 of 27

We’ve done a lot of testing with zirconia, long term.

We find that sandblasting with 50 micron Al203 is optimal for luting zirconia crowns, and I feel it is an imperative.

We also tested Surpass 2 and 3 being placed and light-activated onto the sandblasted zirconia surface provides a very good long term result. We recommend its use with a resin cement like Anchor. ■

Bill Woods, III, DMD
“tripledubya”
Posted: 4/28/2010 • Post: 9 of 27

I am hunting for the best cement for zirconia crowns. A Compendium Supplement identified Z-Prime PLUS on the crown as an adjunct with Duo-Link, but then again, it was an article by the president, research scientist and senior manager for Bisco and this is a Bisco product. The stats were posted on a graph as far as bond strengths with and without Z-Prime and various other self-adhesive resins. Any thoughts? ■ Bill

“Aristotle”
Posted: 4/28/2010 • Post: 10 of 27

It was, but that doesn’t make it inaccurate. We are currently running a long-term study on it. We’ll post the data when we get to the one month and six month periods.

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I can tell you that sandblasting the zirconia is a necessity and that Surpass 2 and 3 following sandblasting and then bonding in the crown will provide really good long-term results. This we have done in our testing – a six month study.

Standard RMGI [resin-modified glass ionomers] (Fuji PLUS) works just fine. More holding power would be a waste.

According to 3M, the surface of Lava is rougher in the following order when air abraded with 25 micron > 50 micron > 110 micron Al-oxide. Air abrasion improves bond strengths, is pretty universal, however, in their own testing of resin bond strength, they reported using 60 micron Al-oxide.

It is possible not all zirconium will react the same due to the way they are processed.