Recommended Zirconia for One-stop Bonding Solution

MM-4D

Strength: 800 - 1300MPa
Translucency: 43% - 55%

- Optimal for full-arch implant restorations with precise fit
- Excellent opacifying ability on the cervical side
- Achieve 6.6h for full-arch fast sintering

GM

Strength: 700 - 1200MPa
Translucency: 45% - 57%

- High translucency, no porcelain needed
- Seamless transition through special filling technology
- Achieve 95 min for long bridge fast sintering

*Data from HUGE Lab.

To achieve the best bonding results, we recommend pairing TopCEM Dual Cure Resin Cement with:

HugeBond Universal FliPro

- 8th-generation light cure dental adhesive with MDP for ultimate bond performance
- Provides reliable bond strength even after 10,000 thermal cycles with various materials
- One-handed cap design with auto-retraction and precise dispensing increasing material utilization by approximately 18%*

Alternatively, you may choose:

TopCEM-Ceramic Primer

- Silane-based formulation with MDP for high bond performance
- A universal primer suitable for multiple restoration interfaces
- Compatible with light-cured or dual-cured resin cements

*Data from HUGE Lab.

If you are looking for a time-saving, one-step, no-primer solution, choose:

TopCEM Vigor SA

Self-Adhesive Resin Cement

- MDP formula for high bond strength
- Bond strength after 5,000 thermal cycles between zirconia and Ti ≥ 20 MPa
- Excellent masking ability to cover the underlying base color.

TopCEM-RMGI

Resin Modified Glass Ionomer Cement-Luting

- High-performance cementation of PFMs, metal crowns, all-alumina or all-zirconia strengthened core ceramic restorations to implant abutments

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TopCEM One-Stop Solution For Zirconia Bonding

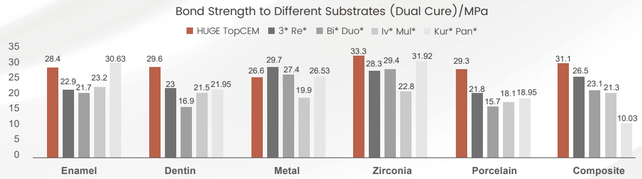
Lab-Grade Precision. Clinical-Grade Performance.

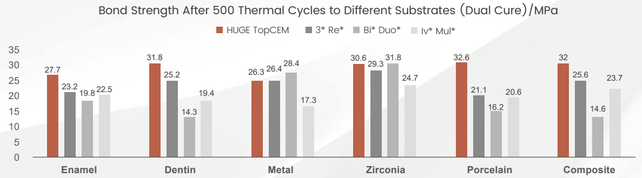
TopCEM Dual Cure Resin Cement is a truly versatile and high-performance dental dual-cure luting resin cement, capable of both chemical and light curing. Its versatility is reflected not only in its ability to bond to all types of materials, but also in its suitability for both chairside and labside. For dentists, it serves as an ideal luting cement designed for permanent and intraoral cementation; for lab technicians, it delivers excellent cementation results when bonding hybrid abutments and restorations.

Reliable Bonding

· Bond strength between zirconia and Ti-Base abutment: ≥ 42 MPa

· Bond strength between zirconia and Ti-Base abutment after 5,000 thermal cycles ≥ 31 MPa



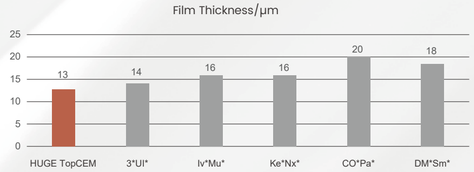


*Data from HUGE Lab, with each resin cement tested using corresponding adhesive or primer.
VinciSmile's Data for porcelain were tested using TopCEM and TopCEM Ceramic Primer, while other data were obtained using TopCEM and HugeBond.

Great Aesthetics

· With PTHP, the final result stays true, with the shade of the Ti base well masked.

· HUGE Zirking MM-4D Zirconia disk provides restorations that look naturally beautiful



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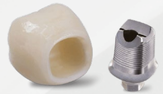
Easy Removal with Controlled Heating

When the restoration is bonded to a cobalt–chromium alloy post using HugeBond and TopCEM, the assembly can be completely separated after holding at 300 ºC for 1 hour in a fast-sintering furnace.



Compatible with Autoclave Sterilization

Autoclaving zirconia and titanium abutments before bonding helps remove organic contamination, restore surface energy, enhance bond reliability, and ensure sterility prior to clinical use.

Using HugeBond with TopCEM to bond zirconia and titanium abutments resulted in an initial bond strength of 42.8 MPa. After 5,000 thermal cycles, the bond strength was 31.5 MPa, and after autoclave sterilization at 130 ºC for 15 minutes, the bond strength remained at 33.0 MPa. This suggests that zirconia–titanium abutments bonded with HugeBond and TopCEM are compatible with autoclave sterilization, while reliable bond performance is maintained.

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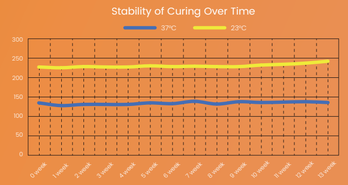
PTHP TECHNOLOGY

PTHP is an innovative self-stabilizing redox technology developed by HUGE. By precisely controlling the oxidation state, it ensures stable physical and chemical properties, while significantly minimizing the effects of high temperatures and long-term storage.

Outstanding heat resistance

· Minimizes temperature sensitivity and prevents premature curing



· Proven stability — TopCEM cures normally after over 13 weeks at 37 ºC

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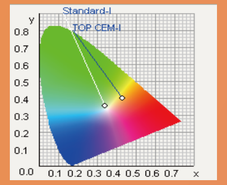
Exceptional color stability

· Achieves outstanding color consistency from pre- to post-curing, ensuring the most natural and aesthetic results



· Shade stability test — △E<1, suggests almost no visible color difference, and the variation is barely perceptible to the naked eye

Cementation Procedure: Lab-side Screw-Retained Crown With TopCEM

1. Preparation/Pre-treatment of Restorations

Apply HugeBond or TopCEM Ceramic Primer.

Dry with oil-free air.
*For HugeBond, light cure after drying.

Prepare TopCEM.

2. Cementation of Implant Crown

Apply TopCEM to the bonding surfaces of the base and the restoration.

Seat the crown onto the abutment.

Light-cure excess cement at the margin for 2s; then remove and clean.

Light cure each side for 10s, or wait for 4-5 minutes.

Technical Parameters-TopCEM	
Flexural Strength/MPa	125.8
Compressive Strength/MPa	344.5
Film Thickness/μm	13
Elasticity Modulus/GPa	8.52
Solubility/μg/mm³	0.6
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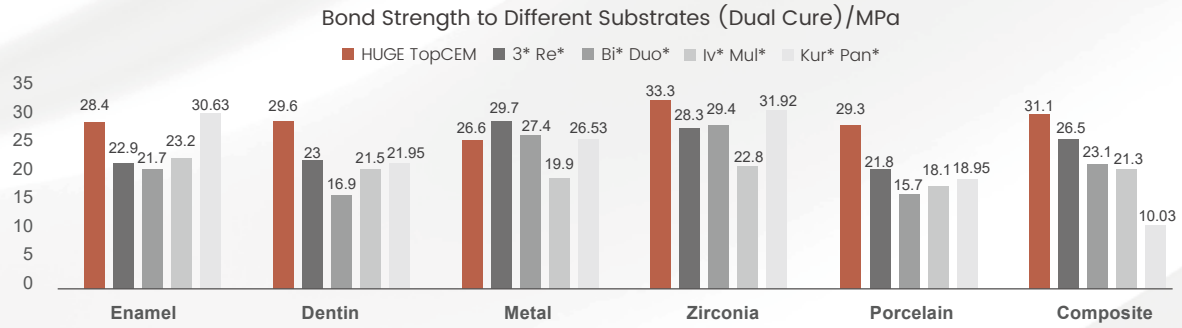

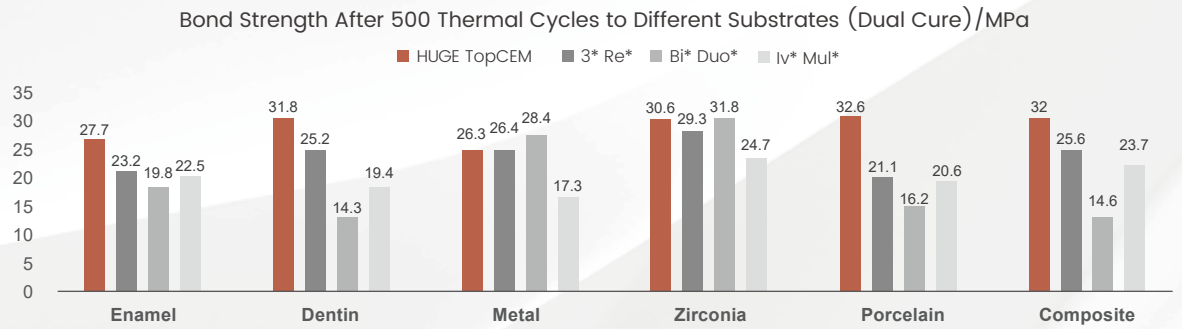

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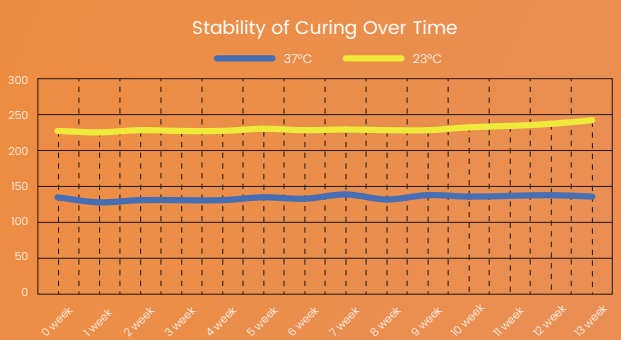

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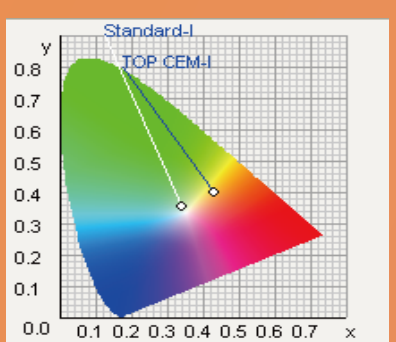

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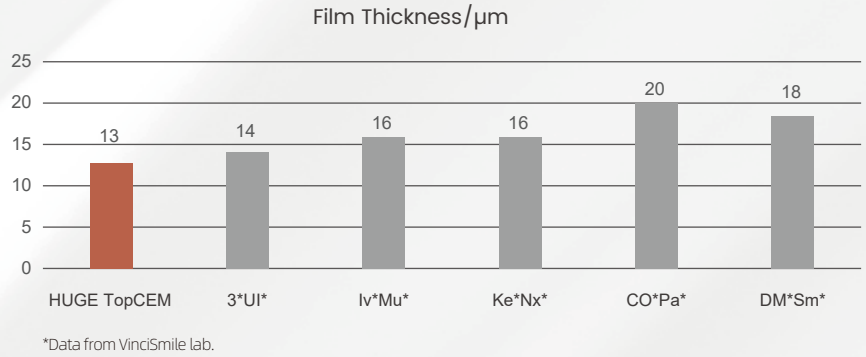

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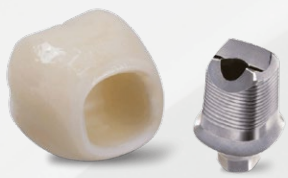

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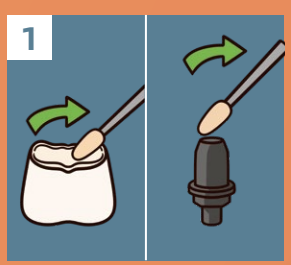

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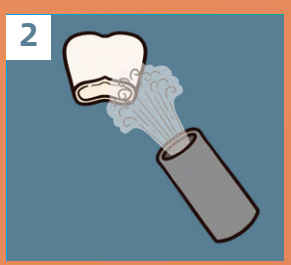

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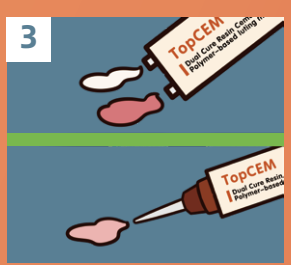

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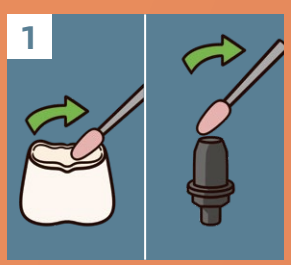

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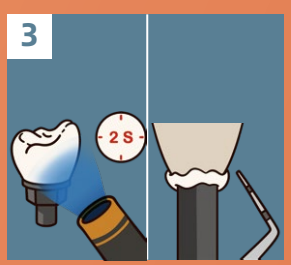

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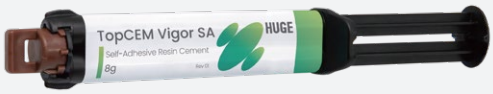

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