



380 Technology Court
Suite 150
Lindon, UT 84042
800-927-6967
www.utahvalleydentallab.com

Dr. David Hornbrook

Clinical Director of Education and Technology

Posterior Non-Adhesive Cementation

Often times, it becomes almost impossible to isolate a posterior preparation to a degree that will allow utilizing a “Total-Etch” or “Select-Etch” technique. With the introduction of more durable and higher flexural strength ceramics, it is acceptable to lute these restorations using a less technique-sensitive protocol. These cements include self-etching resin cements, resin ionomer cements, and bioceramic cements. I prefer to use a self-etching resin cement for these restorations due to their relative high translucency, low film thickness, ease of use, dual-cure properties, and some adhesion to dentin and enamel.

Types of restorations

e.max (lithium disilicate) crowns 1.5 mm thick or greater with adequate retention preparations, zirconium-oxide restorations with adequate retention preparations (both monolithic and core supported), and metal-supported restorations

1) Remove provisional

2) Clean preparation with Chlorahexadine pumice

Recommended Product:
• Consepsis Scrub (Ultradent)

3) Try-in restorations using water or glycerin

4) After checking aesthetics and proximal contacts, rinse thoroughly

5) Prepare restoration for bonding

- a) If restoration is lithium disilicate (e.max)
 - i) Clean internal with phosphoric acid, rinse, and dry
 - ii) Apply silane coupling agent for 1 minute

Recommended Products:

- Porcelain Primer (Bisco)
- MonoBond + (Ivoclar)

b) If restoration is zirconium-oxide or metal-based

i) Clean internal with NaOH2

Recommended Product:

- Ivoclean (Ivoclar)

ii) Place Zirconium-oxide/metal primer on internal surface for 1 minute

Recommended Product:

- Z Prime + (Bisco)

c) Place the dual-cure, self-resin cement on the inside of the restoration

Recommended Products:

- BisCem (Bisco)

- MaxCem Elite (Kerr)
- Unicem 2 (3M)
- MultiLink Automix (Ivoclar)

d) Seat restoration completely using blunt tipped instrument - do not clean up excess

e) “Tack”- using a 2.0 mm light guide in middle of occlusal surface for 5 seconds, away from margins

f) “Wave”- using 8.0 mm or 11.0 mm light guide and “Wave” all margins for a total of 5 seconds

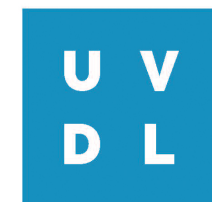
g) Remove excess resin gently using Bard Parker blades, scalers, and explorer

- h) Floss through contacts using waxed dental floss
- i) Place glycerin around all margins
Recommended Products:
- DeOx (Ultradent)
 - Liquid Strip (Ivoclar)
- j) Light polymerize for at least 40 seconds
- k) Rinse off glycerin
- l) Remove excess cement using scalers, Bard Parker blades, etc
- m) Finish margins and adjust occlusion using 15 or 25 μm finishing diamonds
Recommended Product:
- Hornbrook Finishing kit (Brasseler)
- n) Finish interproximals with finishing strips
Recommended Product:
- 1954N strip (3M)
- o) Polish all margins (that were adjusted) and occlusal surfaces using ceramic polishing points and cups
Recommended Products:
- Hornbrook Lithium disilicate adjusting and polishing kit (DiaShine/VH Technologies)
 - Hornbrook Zirconium-oxide adjusting and polishing kit (DiaShine/VH Technologies)
 - OptraFine (Ivoclar)



For technical questions, contact Dr. David Hornbrook at david@hornbrook.com

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