Anterior Adhesive Cementation

The most durable and strongest bond when cementing anterior restorations is always to use a “Total-Etch” or “Select-Etch,” 4th or 8th generation dentinal adhesive system combined with a resin cement. My recommendation is to use a “light-cure” only cement which allows for unlimited working time, color stability, and immediate polymerization upon curing.

Types of restorations

IPS Empress veneers and crowns, e.max (lithium disilicate) veneers and crowns, feldspathic veneers and crowns, and zirconium-oxide restorations (both monolithic and core supported)

1) Remove provisional

2) Clean preparation with chlorahexadine pumice

   Recommended Product:
   • Consepsis Scrub (Ultradent)

3) Try-in restorations using water soluble try-in gels using different shades of the try-in gels to obtain desired final

   Recommended Products:
   • Variolink Esthetic (Ivoclar)
   • Choice 2 (Bisco)
   • Relyx Veneer Cement (3M)
   • NX 3 (Kerr)

4) Clean out try-in gel using air/water syringe from inside restoration when shade is chosen

5) Prepare restoration for bonding

   a) If restoration is IPS Empress, feldspathic, or 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
      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 a very thin layer of unfilled resin and air thin

   d) Place the light-cure only resin cement inside restoration and place in light protective container

   Recommended Products:
   • “Light-Cure” only cements
     • Variolink Esthetic (Ivoclar)
     • Choice 2 (Bisco)
     • Relyx Veneer Cement (3M)
     • NX 3 (Kerr)
   • Light protected container
     • VivaPad- (Ivoclar)

6) Prepare teeth for adhesive bonding

   a) After shade selection, rinse teeth thoroughly to remove try-in gel

   b) Etch dentin and enamel for 15-20 seconds using a 35% phosphoric acid
Recommended Product:
• HV Select Etch (Bisco)

c) Rinse and lightly dry
d) Apply glutaraldehyde /water/ HEMA desensitizer
   Recommended Products:
   • MicroPrime G (Danville)
   • Telio Desensitizer (Ivoclar)
   • Gluma (Heraeus)
e) Place adhesive agent
   Recommended Products:
   • All Bond 3 (Bisco)
   • All Bond Universal (Bisco)
   • Scotchbond Universal (3M)
   • Adhese Universal (Ivoclar)
f) Air Dry and light polymerize for 10 seconds
   Recommended Products:
   • Bluphase Style (Ivoclar)
   • Valo Cordless (Ultradent)
g) Place all restorations in at one time-inward upward pressure using instruments to ensure complete seating-do not clean up excess
h) “Tack”- using a 2.0 mm light guide, tack each restoration into place for 1 second in the middle of the restoration away from margins
i) “Wave”- using an 8.0 mm or 11.0 mm light guide, “Wave” all restorations for a total of 5 seconds
j) Remove excess resin gently using Bard Parker blades, scalers, and explorer

k) Floss through contacts using a metal strip
   Recommended Product:
   • Serrated Saw (Brasseler)
l) Floss through contacts using waxed dental floss
m) Place glycerin around all margins to eliminate the oxygen inhibition layer
   Recommended Products:
   • DeOx (Ultradent)
   • Liquid Strip (Ivoclar)
n) Light polymerize for at least 40 seconds per restoration
o) Rinse off glycerin
p) Remove excess cement using scalers, Bard Parker blades, etc
q) Finish margins using 15 or 25 μm finishing diamonds
   Recommended Product:
   • Hornbrook Finishing kit (Brasseler)
r) Finish interproximals with finishing strips
   Recommended Products:
   • 1954N strip (3M)
   • Epitax Strips (GC)
s) Polish all margins (that were adjusted) and adjust occlusion using ceramic polishing points and cups
   Recommended Products:
   • Hornbrook lithium disilicate adjusting and polishing kit (DiaShine/VH Technologies)
   • OptraFine (Ivoclar)

Cementation Guidelines courtesy of Keating Dental Arts
16881-A Hale Avenue
Irvine, California 92606
1-800-433-9833
www.keatingdentalarts.com
For technical questions, contact Dr. David Hornbrook at hornbrook@keatingdentalarts.com