Todd C. Snyder, DDS, AAACD

Private Practice in Laguna Niguel, California
Accredited, American Academy of Cosmetic Dentistry
Former Faculty, UCLA Center For Esthetic Dentistry
Member of Catapult Education

Essential Tool
How will you diagnose?

How will you treat?
Everyday Go To Minimally Invasive Burs

0710C   1300F   0512C   0116C

DISPOSABLE SINGLE USE DIAMONDS

Buy 4 Get 1 Free!
Any Combination of NeoDiamond & NeoBurr
Promo Code: XKT541
Offer expires 2/2/2017
MicroCopyDental.com

I Want This!
Large Defects (occlusal)

Recurrent decay

Think about material choices & their long term durability & susceptibility for failure in adhering to deep dentin.

pulpal proximity
Large sized Lesions (>2MM)

- Mostly dentin
- Dentin has more moisture and less substance
- Open and Closed defects
- Complications & Risks are higher
- Porous, Wet, Dentin Available
- Interproximal concerns
- Increased Occlusal Loading
- Remaining Tooth Structure

**Bond Strengths Related To Type of Dentition**

![Bar Chart]

*Irie m, suzuki k, watts dc. 2004, marginal gap formation of light activated restorative materials, affects of immediate setting shrinkage and bond strength. Dent Mat 18, 2002; 203-210*
Caries Indicator Dyes

- Roydent-To Dye For
- Kuraray-Caries Detector*
- Ultradent-Seek*/Sable Seek*
- ProOptions-Caries Indicator
- Danville-Caries Finder
- Pulpdent-Snoop
- Vista-Caries Indicator
- Ronvig-See It
- Patterson-
- Henry Schein-
- Pearson-

Note Caries on Floor of 2nd Molar
Further Inspection Reveals More Caries

Handpiece Lubricants

Higher bond strengths when using tungsten carbide burs with SE adhesives

Long term failure occurs at gingival margins and adhesive interfaces.

Preparation

• Limited to removal of pathology with the exception of access and bevels.
• Maintaining enamel and superficial dentin
• Preserving occlusal stops
  – Marginal ridges
  – Transverse ridges
  – Oblique ridges
• Rounded line angles
• Purge hand piece oils
• Bur Choice
ADHESION

Bonding to Enamel/Dentin

Total-Etching

Drawbacks:
- MMP activity from acid etching
- Bond strength to dentin
- Technique
- Sensitivity
Adhesion process – Total Etching

- Smear layer
- Dentin
- Dentinal tubule
- Dentin fluid
- Odontoblast

37% Phosphoric acid

Adhesion process – Total Etching

- Smear layer
- Dentin
- Dentinal tubule
- Dentin fluid
- Odontoblast
Adhesion process – Total Etching

Adhesive

Etched dentin

Post- Operative Sensitivity
Adhesion process – Total Etching

Composite resin

Post- Operative Sensitivity

Problem with Total Etch Bonding
(Over drying phenomenon)

Dentin
Problem with Total Etch Bonding
(Over drying phenomenon)

Phosphoric acid

Dentin

Problem with Total Etch Bonding
(Over drying phenomenon)

Water
Problem with Total Etch Bonding
(Over drying phenomenon)

No filtration into the collagen fiber
Excess drying

Shrinkage of collagen fiber

Adhesive
Problem with Total Etch Bonding (Over wetting phenomenon)

- Adhesive
- Insufficient drying
- Water

Bonding to Enamel/Dentin

Self-Etching

- Need to selective etch enamel
- MMP activity from acidic monomers pH x<2
- Bond strength
- Technique
- Sensitivity
Adhesion process - Self-Etching

Use Carbide Burs

Large layers inhibit acidic monomers

Duration of exposure & acidity

Dentin

Dentinal tubule

Smear layer

Dentin fluid

Odontoblast

Self-etching adhesive

Use Carbide Burs

Large layers inhibit acidic monomers

Duration of exposure & acidity

Dentin

Dentinal tubule

Smear layer

Dentin fluid

Odontoblast

Use Carbide Burs

Large layers inhibit acidic monomers

Duration of exposure & acidity
Adhesion process - Self-Etching

Use Carbide Burs

Self-etching adhesive

Smear layer

Dentin

Dentinal tubule

Dentin fluid

Odontoblast

Duration of exposure & acidity

Large layers inhibit acidic monomers

Use Carbide Burs

Self-etching adhesive

Smear layer

Dentin

Dentinal tubule

Dentin fluid

Odontoblast

Adhesion process - Self-Etching

Sealing the Dentin

Hybrid layer

No Post- Operative Sensitivity

Excellent sealing and desensitizing

Fixing Odontoblast
Factors that compromise bond durability in restorative dentistry

“Hydrophilic dentin bonding (1956 - 

CRITICAL REVIEWS IN ORAL BIOLOGY & MEDICINE
A Critical Review of the Durability of Adhesion to Tooth Tissue: Methods and Results

J. De Munck, K. Van Loon, M. Pivarnik, A. Polimeni, P. Lombardo, M. Bruenn, and B. Van Meerbeek

“The major shortcoming of contemporary adhesive restoratives is their limited durability in vivo.”
Factors that compromise bond durability in restorative dentistry

Hydrophilic dentin bonding (1956 -

 alarming words ...

but the reality we face should trigger alarm

Tooth-colored resin restorations have an average replacement time of 5.7 years due to secondary caries.

We challenged that current dentin adhesive designs that incorporate increasing concentrations of hydrophilic monomers are going in the wrong direction.

Water sorption
Polymer swelling
Decline in mechanical properties
Leaching of hydrolyzed resin components
Factors that compromise bond durability in restorative dentistry

Hydrophilic dentin bonding (1956 - 2017)

Intact hybrid layers created by a simplified etch-and-rinse adhesive in caries-affected primary dentin partially disappeared after 6 months of intraoral function.

Instability of hybrid layers - problem may be more severe than we realize.

Demineralizing dentin is like opening the Pandora’s box, releasing endogenous enzymes (Matrix Metalloproteinases - MMPs) that were trapped within the mineralized dentin matrix.

In the presence of water (such as that derived from water sorption or from adhesives, MMPs (2,8 & 9) can breakdown collagen fibrils that are not protected by intrafibrillar minerals.

Sukala et al. (2007)
Mazzoni et al. (2007)
Bond Degredation


Resin-dentin bonds are not as durable as was previously thought. Microtensile bond strengths often fall 30% to 40% in 6 to 12 months.

What is the best adhesive?

Can you get good results?
GETTING TO THE FINISH LINE — ACCURACY, CONSISTENCY & SPEED

• Courtesy Pacific University (Dr Marc Guisberger)
InstroN

• Ultra Tester (Ultradent)
• Ultra Jig (Ultadent)

Ultradent’s shear bond strength testing method has been adopted as an ISO Standard. The UltraTester machine uses this highly accurate method to determine bond strengths.
Technique & Errors

Shear Bond Test Results - 2012
Average Shear Bond Strength to Dentin: 24.2 MPa

*Courtesy Pacific University (Dr Marc Guisberger)
• Courtesy Pacific University (Dr Marc Guisberger)

Shear Bond Test Results - 2012

Maximum/Minimum Shear Bond Strength per Bonding Material

![Bar Chart showing shear bond results for different bonding materials.

1.2ml syringe OR 4ml bottle]

Getting to the Finish Line: Accuracy, Consistency & Speed
Two Etching Options

Total-Etch: Ultra-Etch
- Phosphoric Acid
- Rinse

(Removes Smear Layer) 5th Generation

Self-Etch: Peak SE
- Acid/Primer
- No rinse

(Modifies Smear Layer) 6th Generation

Total Etch: Ultra-Etch
- 35% phosphoric acid gel
- Award winning
- Leading the industry for over 20 years
- Used for all total-etch bonding
- Contains a surfactant; rinses easily
- 20-seconds for optimal etch pattern
Phosphoric acid etching “opens” the surface to receive resin

Dentin

Enamel

Peak Universal Bond

• Peak Universal Bond is an adhesive resin ideal for all bonding procedures
• Can be used with a self-etch or total-etch technique
• 7.5% filled and can be thinned to 2µm
• Ethyl alcohol solvent carrier
• Cures with most high intensity lights including LEDs
• Contains chlorhexidine (0.2%), which may ensure long-term bond strength.

1.2ml syringe OR 4ml bottle
Peak Universal Bond works best when the preparation is left slightly damp.

**Preparation**

Too moist  [Image]

Slightly Moist
Application

• Apply a puddle coat and agitate for 10 seconds
• Solvent chases the moisture in dentinal tubules, carrying the resin with
• The more it travels the better mechanical retention AND reduced sensitivity

Thinning/Drying

• Thinning: ½ inch – ½ air pressure direct (Don’t wave…)
• All adhesives should be “Saran Wrap” thin and glossy
• Solvents must be dried thoroughly for 10 seconds
Solvent

Ethyl alcohol chases moisture in the tooth and carries the resin with it deep into the enamel rods or dentinal tubules.

Once the resin is in the tooth structure, the ethyl alcohol must be evaporated to ensure optimal bond strengths.

Dry air source

- Evaporate volatile solvents
- Drying dentin & enamel
- Do not desiccate
Polymerization

Cure with VALO for 10 seconds or 20 seconds for lights with output <600mw/cm²

Comparisons - Lights
Access to the curing site = Energy to the resin
WHAT ARE YOU **MISSING?**

When it comes to curing, the circumstances aren’t always ideal. Squirming patients, sectional bands blocking the light from getting to the entire restoration, even a simple hand movement can prevent a complete cure. That’s where the VALO Grand curing light comes in. The VALO Grand light has a large 12 mm lens that allows you to cover more area in a single cure. With the VALO Grand light, you won’t miss a thing.

<table>
<thead>
<tr>
<th>AVERAGE COMPETITOR</th>
<th>VALO</th>
<th>VALO GRAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURFACE AREA</td>
<td>48 mm²</td>
<td>78 mm²</td>
</tr>
<tr>
<td>ACTUAL SIZE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 MM MOLAR COVERAGE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

POWERFUL **BROAD-SPECTRUM CURING**

A lot of curing lights only have a single LED chip that operates on one wavelength. This can create hot and cold spots in the beam, which makes uniform curing nearly impossible. The original VALO curing light was created to answer that problem. With four powerful LEDs that deliver a uniform light over a broad spectrum, you know that you are getting a powerful, uniform cure that will last. The VALO Grand has that same uniform power you expect, plus a larger lens.
VALO delivers

• 3 powerful curing modes

Machined from Aerospace Aluminum
Comparisons - Chargers
Conclusions

“Adhesive technology has undergone great progress in the last decade. In light of the major drawbacks attributed to all-in one adhesives, conventional 3-step etch & rinse adhesives & (mild) 2-step self-etch adhesives are still the benchmarks for dental adhesion in routine clinical practice”.

*Relationship Between Bond-Strength Tests & Clinical Outcomes, B.Van Meerbeek et al, Leuven Biomat Research Center, Dept of Conservative Dentistry, School of Dentistry, Catholic University of Leuven, Belgium*
Problem
Varying tooth substrates

*Enamel & Variable Dentin Bonding*

What substrate are we treating?

*Composite Preparation*

Class I or II

3x Tubule Density Equals Higher Fluid & Increased Difficulty for Bonding 30% Decrease in Bond Strengths with most bonding systems.
“Adhesive dentistry could be expressed as a simple relationship between bonds and stress. If the bonds can withstand the stress, the restorative technique will be successful.”

Unterbrink and Liebenberg (1999)

“C-Factor” Definition

Configuration Factor:

“The ratio of bonded to un-bonded (free) surfaces”

Feilzer, DeGee, Davidson (1987), Universtiy of Amsterdam, ACTA
Lowest Stress

Low Stress

Medium Stress

High Stress

Highest Stress

“C-Factor”

Base/ Lining

Excellent Flow & Handling
Flowable composite injected into the cavity
Preparations > 2mm

- Traditionally, numerous increments have to be placed to diminish polymerization shrinkage as well as stress on tooth structure.
GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED

Technique
Flowable & Bonding Agent?

Composite
GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED
EFFECTS OF COMPOSITE LAYERING ON BOND STRENGTHS

Influence of C-Factor & Layering Technique on Microtensile Bond Strengths to Dentin; S. Nikolaenko, R. Frankenberger et al, University of Erlangen, Nuremberg Germany, Dental Materials, 2004 Vol. 20: 579-585

Internal (Polymerization) Stresses of Composites

"A Simple Pain-Free Adhesive Restorative System by Minimal Reduction & Total-Etching (1993)
Takao Fusayma DDS,
Tokyo Medical & Dental University
Dentin Replacement with Composite Cap

- **Dentin substitute**
  - Composites
    - Bulkfil Flowables
    - Flowable Resins
  - Glass Ionomers

- **Enamel Replacement**
  - Modern NanoHybrid Composite
  - CR April 2014 NanoHybrid offers best results

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**Substrate**

- Best long term bonds to phosphoric etched enamel.
- Superficial dentin can have high bond strengths but has MMP activity and water absorption which will disrupt bonds with time even though it offers higher bond strengths than deep dentin.
- Larger thicknesses of composite stress the bond to tooth structure
**Dentin Bulk Fill Composites**

- Bulk fill composites 4mm max typically
- More translucent
- Typical shrinkage is approx. 3.1-3.5%
- Shrinkage stress is 1.6*-3.13mpa
- Venus Bulk Fill flowable (Kulzer)
- SureFil SDR Flow (Dentsply)*
- Xtra Base (Voco)
- Beautifil Bulk Flow (Shofu)

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**Bulk Fill Composites**

- Dentin & Enamel Replacement
  - Requires one layer
- Bonding agent used?
- Long term research?
- C-factor?
- Voids?
- Depth of cure?
These CRA research results agree with Dr. Tagami’s results on SonicFill. Tagami stated SonicFill cures to only 70% on bottom at 4 or 5mm depth of cure.
CRA questions the ability for most practitioners to place bulkfill materials properly in addition to getting adequate curing.

Curing bulk fills remains a question

Test your light output and practice with your materials

Internal (Polymerization) Stresses of Composites

“A Simple Pain-Free Adhesive Restorative System by Minimal Reduction & Total-Etching (1993)
Takao Fusayma DDS,
Tokyo Medical & Dental University
SELF CURE BULKFILL....

- Danville-BulkEZ
- Coltene-Fill-Up!

<table>
<thead>
<tr>
<th>Competitive Bulk Fill Composites</th>
<th>Microleakage scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk fill -- M</td>
<td>2.8 ± 1.3</td>
</tr>
<tr>
<td>Bulk fill -- K</td>
<td>2.8 ± 1.1</td>
</tr>
<tr>
<td>Bulk fill -- D</td>
<td>2.8 ± 1.6</td>
</tr>
<tr>
<td>Bulk EZ™</td>
<td>0.2 ± 0.4</td>
</tr>
</tbody>
</table>

Releases/recharges calcium, phosphate and fluoride
Chemically bonds and seals tooth
• No Bonding agent necessary
• No layering bulkfill
• No polymerization stress
• Bioactive
• Bioavailable
• No sensitivity

Source: University testing (see back page for trademark information)
DO Restoration
Tooth #29

CLASS V AND CLASS II TOOTH #31
Drawbacks of Any Composite Resin

- Material placement techniques
- Variable substrate
- Polymerization stress & shrinkage
- Water absorption
- Hydrophobic bonding agents
- Decreased adhesive bond strength over time
- MMPs and Cathepsins
- Microleakage

Decreased Bond Strengths due to

- Substrate
- Preparation technique
- Bur selection
- Hand piece oils
- Bonding agent
- Curing device and position
- Material selection
- Layering technique
How are you restoring these different preparations?

**Why Glass Ionomers?**

- Bioactive material
  - affinity to tooth structure. When placing a glass ionomer a weak acid or conditioner is used to aid in releasing calcium and phosphate ions from the tooth structure. These calcium and phosphate ions combine into the surface layer of the glass ionomer and form an intermediate layer called the interdiffusion zone. This bond layer can be very strong and significantly reduce the microleakage that would occur at the margins of the restoration.

- Very good fluoride and ion release helps remineralize tooth structure in the remineralization–demineralization process that naturally occurs in the oral cavity.

- They bond to enamel, dentin, and metals.
Why Glass Ionomers?

• They produce good marginal integrity.
• They shrink only one ninth the amount of composite material.
• They are fluoride-rechargeable.
• There are no free monomers in the material.
• The cavity preparation can be bulk-filled, making the materials easy to place.
• They exhibit excellent biocompatibility.

(RFA-DE-10-004)
“ Tooth-colored resin restorations have an average replacement time of 5.7 years due to secondary caries precipitated by bond failure.”

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3148178/

Fig. 15 – Graph representing the mean annual failure rates per adhesive class, determined according to a systematic review of Class-V clinical trials of adhesives during the period 1998–2004 [2].

Deep Preparations

- Bonding Agent & Flowable composite
- Conventional Glass Ionomer or GI then Composite
  - Fluoride Release
  - High compressive strength
  - Hydrophillic
  - Insoluble
  - True chemical adhesion
  - Minimizes microleakage
  - No sensitivity
  - Acid Base Resistant Zone
  - Decreased gap formation & C Factor
  - Coefficient thermal expansion similar to dentin
LARGE SIZED LESIONS (>2MM)

- Mostly dentin
- Dentin has more moisture and less substance
- Open and Closed defects
- Complications & Risks are higher
- Porous, Wet, Dentin Available
- Interproximal concerns
- Increased Occlusal Loading
- Remaining Tooth Structure

GLASS IONOMER SANDWICH

- Class I, II, III & V posterior restorations
- Open & Closed Sandwich techniques
- Composite replacement
- Amalgam replacement
- High caries risk patients
- Pediatric patients
- Geriatric patients
- Special needs patients
- Long term resistance to microleakage
microleakage testing in vitro using three different bases under composites

T. DUONG, L. TRAN, R. PERRY, G. KUGEL, Special Issues of the Journal of Dental Research. ABSTRACT #0366 > Tufts University School of Dental Medicine, Boston, MA, USA.

abstract:

Objective: To compare Class II microleakage in vitro of three different bases placed under composite restorations.

Methods: Thirty-six extracted molars were prepared as Class II MOD/O: 2mm occlusal depth, 2mm axial box depth, 3-5mm gingival box width, and 1mm gingival margin below CEJ. Teeth were randomly divided into three groups of twelve (Groups 1-2 = glass ionomer; group 3 = flowable resin). Group 1-Riva Light Cure GI (SDI), Group 2-Riva Self Cure GI (SDI), Group 3-Esther-X Flow (DENTSPLY Caulk). All groups were primed with Clearfil SE Bond Primer and Bond (Kuraray). All samples were then restored using ICE nano-hybrid Composite (SDI), finished and polished. Restorations were thermocycled for 300 cycles between 5°C and 55°C with a dwell of 30 seconds and then placed in 0.5% aqueous basic fuchsin dye for 24 hours at 37°C. Samples were sectioned mesiodistally and scored independently by two evaluators for microleakage at the occlusal-cavo and proximal-cavo surfaces under a 40x stereomicroscope. Dye penetration was evaluated using a scoring system:

0 = no penetration, 1 = penetration in enamel/cementum, 2 = penetration at the axial wall, 3 = penetration beyond the axial wall.

Results: A Kruskal-Wallis test revealed no statistically significant difference in microleakage between the three groups at the occlusal-cavo surface (p>0.05). Group 3 was found statistically different at the proximal-cavo surface. Group 3 yielded the most microleakage at both interfaces while Group 2 showed no axial wall penetration at either interface.

Conclusion: Both light-cured and self-cured glass ionomers were more resistant to microleakage than a flowable resin on both occlusal-cavo and proximal-cavo surfaces.

GLASS Ionomer Materials

- Dentsply-ChemFil Rock Restorative
- SDI-Riva LC, light cure HV, Riva SC, self cure HV
- G.C. America-Fuji II LC, Equia Fil (Fuji IX)
- VOCO-Ionolux, Ionofil Molar AC
- 3M/ESPE-Ketac Nano, Photac Fil Quick, Vitremer, Ketac Molar Quick, Ketac Fil Plus
- Shofu- FX II
COMPRESSIVE STRENGTHS

- GC EquiaFil Compressive Strength 255mpa
- Equia Forte 280mpa
- Riva SC compressive strength 271mpa
- Voco Ionolux had higher compressive strength than Equia Fil
- Surefil SDR compressive strength 220mpa
- Dentin 280mpa-297mpa
- Enamel 384mpa
- Grandio SO HF has compressive 417mpa
- Fuji II LC 170mpa (RMGI) Compressive strength
GLASS Ionomer Interface

Dentin Margin

Acid Base Resistant Zone

In vivo occlusal GI margin

Photo courtesy Dr. Brian Nový
image at 80 X
Open Sandwich with glass ionomer & nanohybrid composite

Glass Ionomer vs. Open Sandwich
Glass Ionomer vs. Open Sandwich

• 7 years later.

Interproximal Contacts

Tofflemire vs. Sectional Matrices
Polydentia SA

QUICKMAT DELUX

Class II Direct Composite

QUICK RINGS & SILICONE RUBBER ADAPTERS
MICROTHIN MATRICES 0.025MM (0.001 IN)
WOODEN WEDGES
NiTi only spring

Anatomically shaped tines

Built in lip for increased stability in forceps

V-Shaped glass reinforced autoclavable plastic tines (leaves room for the wedge)
TrioDent has developed *Narrow V3 Ring* in addition to the *Universal V3 Ring* to ensure ideal separation on smaller teeth.

Note how the anatomical shape of the V3 Ring matches the lingual contour of the molar while engaging the gingival undercut.
Wave Wedge

Hole to fit with positive grip Pin-Tweezers

Inter-proximal contour for a better gingival seal and V-shaped concavity to protect the papillae

Pin-Tweezers
Tab can be bent 90° for contra-angle placement.

Holes designed to fit with positive grip Pin-Tweezers.

by TrioDent
GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED

by TrioDent

GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED

by TrioDent
**SuperCurve**

Super snug, non-stick

- Micro-thin – 35-38µ (0.0014”)

- Color-coded for easy recognition and re-ordering

- Matrix very stable after placement

- Less risk of catching matrix wings during ring placement, especially with a back-to-back MO/DO
GETTING TO THE FINISH LINE…ACCURACY, CONSISTENCY & SPEED

Garrison Dental 3D Ring System
Garrison Dental
XR = Extra Retention

Fender Wedges & Slick Bands
Anterior Composites

1. Photography
2. Magnification
3. Test Composite Colors
4. Shape
5. Texture/polish

Whiten First
Shade Selection

Maxillary Bleaching Evaluation / Mandibular serves as the Control

EYESPECIAL C-II (SHOFU)
EYESPECIAL C-II (SHOFU)

- Designed for dentistry
  - 8 modes
  - 12 Megapixels
  - Dental cropping and grid lines
  - Large LCD touchscreen
  - Water and chemical proof
  - Durable rugged Exterior***
  - Fast autofocusing & anti-shake capabilities
  - Held with one hand – **weighs only 1lb**
  - Compatible with the Eye-Fi X2 card – Immediately upload images onto PC, iPad, Tablet or Smartphone

MAGNIFICATION RANGE

- Chose the magnification ratio/range by rotating the dial key
- Icons to help you determine and select the range properly
EDIT & DRAW FUNCTION ON THE EYESPECIAL C-II

- Edit functions are ideal for patient education
- Under the Menu key you can:
  - Draw on images to show areas of focus
  - Rotate the image
  - Protect the image against being deleted

ISOLATE SHADE MODE FOR OPTIMAL SHADE MATCHING
One Shade of Mosaic

Vit-l-escence
1994

high-translucency, opalescent/translucent micro-hybrid system average particle size of 0.7µm.
• nanohybrid
• Superior handling
• High polishability & gloss retention
• Exceptional wear
• Unique syringe design
• Intuitive shade offering

One Shade of Mosaic
Three Shades of Mosaic

Layered shade guide made of composite

13 Dentin Shades
Tapered Handle = Dentin Only
Tooth = Dentin + Enamel Neutral

Opaque
White
Not Layered

6 Enamel Shades
Not Layered
Consistent chromatic progression between shades

Shade is printed on syringe barrel and handle tip of syringe

Shade category indicated by color-coded syringe handles
Enamel = White
Dentin = Beige

Convenient flip cap stays connected to the syringe

Unique, hygienic syringe design is easy to clean. The ergonomic handle covers syringe threads for reduced risk of contamination.
Shade category indicated by color-coded snoods
- Enamel = White
- Dentin = Beige

Unit-dose Singles contain .2g of material and are compatible with standard composite dispensing guns.
Jiffy Polishing System

One Shade of Mosaic
One Shade of Mosaic
One Shade of Mosaic
One shade this week
Second Case This Week
Three Shades of Mosaic A3, EN, EY

First Key to Accuracy, Consistency & Speed

Photos, Color & Trans, Mockup, Template
Three Shades of Mosaic A3, EN, EY
Second Key to Accuracy, Consistency & Speed

Shape, Texture & Polish
Three Shades of Mosaic A3, EN, EY
Big Cases or Small Cases
GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED

[Images of teeth and dental implants]

GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED

[Images of dental prosthetics]
GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED
GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED

Aesthetic Dental Design
Todd Snyder, D.D.S.
Vision is critical
GETTING TO THE FINISH LINE... ACCURACY, CONSISTENCY & SPEED
Anterior Composite Bonding

CLASS IV TEMPLATE TECHNIQUE