

THE DENTAL ADVISORTM

"Improving Patient Care Through Research & Education"



Photography by Gloria G. Poy, R.N., D.A., Hartland, Michigan

Update on Composites

Dental resin composites have continued to evolve since their introduction in the late 1960s. While composites continue to be formulated from Bis-GMA resin, the composition and distribution of filler particles have changed dramatically. The development of new fillers with particle sizes in the range of 0.01 to 0.10 μm has led to composites with improvements in esthetics, polymerization shrinkage, strength, wear resistance, and handling. While nearly all composites contain colloidal silica, nanofillers are oxides manufactured by novel processes resulting in products with improved properties. These new composites can typically be used for both anterior and posterior restorations and are often referred to as universal composites.

This issue of THE DENTAL ADVISOR describes the properties of 16 recent composites.

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Ratings

Excellent	+++++
Very Good	++++
Good	+++

Nanofills and Nano-hybrids – newest composites (**3M ESPE Filtek Supreme Plus Universal Restorative**), consisting of nanofillers (<0.10 µm) and other particles similar to microhybrid fillers. Nanofillers help to improve handling and polishability, while increasing the filler load. Their strength is in the range of microhybrid composites, and they have relatively low shrinkage and high wear resistance.

Range of Filler Particle Sizes

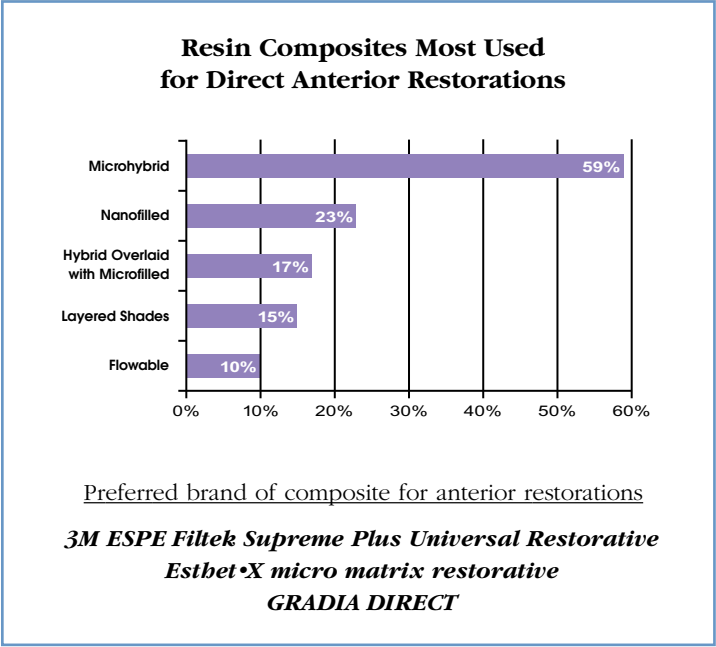
- Microfill: 0.02 to 0.04 µm - colloidal silica
- Microhybrid: 0.2 to 1.0 µm - glass fillers plus colloidal silica
- Nanofill: 0.01 to 0.10 µm – particles and clusters
- Nano-hybrid: 0.01 to 0.10 µm, 0.2 to 0.8 µm – bimodal distribution of nanofillers and glass fillers

Advantages of Composites with Nanofillers

- Increased filler loading
- Lower polymerization shrinkage
- Reduced wear
- Adequate strength and modulus of elasticity
- Improved polishability and retention of gloss
- Improved esthetics (increased translucency)
- Improved handling

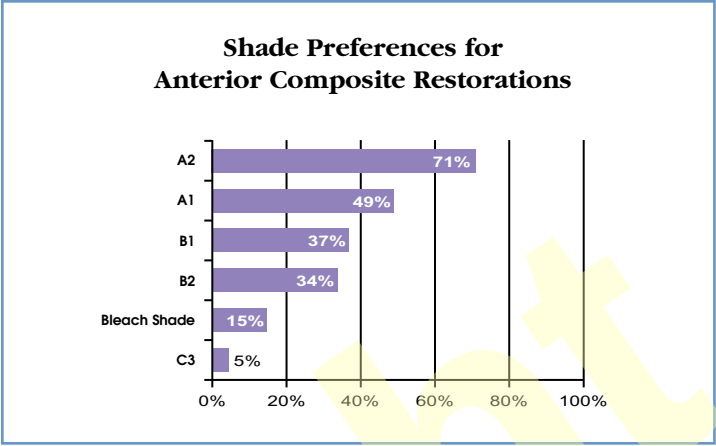
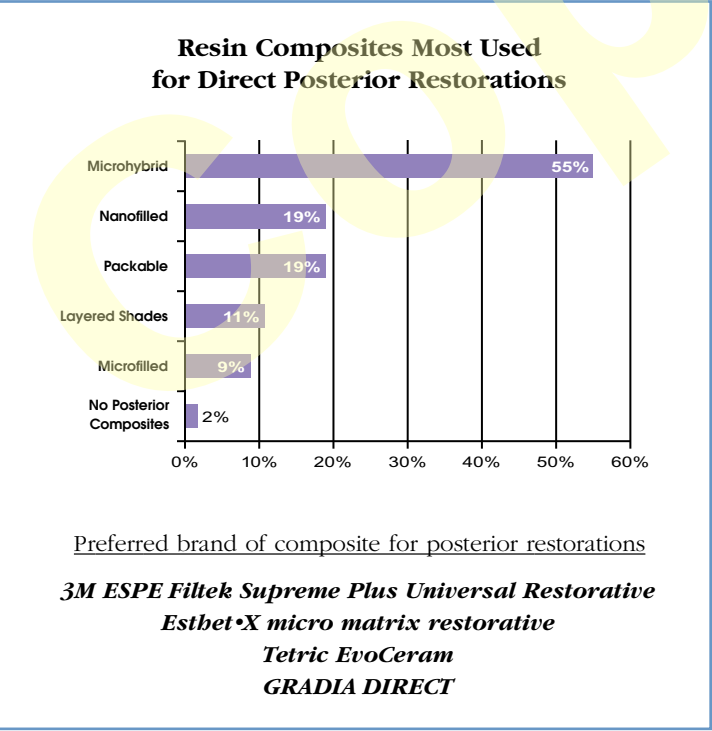
Survey of Clinical Consultants

Over 100 of our clinical consultants responded to a survey on usage of composites. The results of the survey are shown throughout the article.
Editors' Note: The survey results were not used to rate products.



Tips for Shade Selection

- For more accurate shade matching and improved bonding, complete tooth whitening a minimum of one week before placing composite restorations. This delay allows for shade rebound, more accurate shade selection, and removal of residual oxygen from the teeth.
- Do not over-dry the tooth before shade matching. As the tooth re-hydrates, the tooth will darken.
- Select shades before placement of dam material.
- Avoid distracting colors such as lipstick, bright bibs, or bright clothing when shade matching.
- Place and cure selected shades on un-etched tooth in the approximate thickness of the final restoration for patient approval and final selection.
- When the adjacent teeth are significantly different in shade, try to match to the lighter shade.
- Limit shade matching to five seconds at a time. Usually the first perception is the best match.
- If a shade cannot be selected to match, select the closest two shades and start with the lighter one. Lighter shades are easier to darken with layering if needed. A dark shade layered over a light shade has greater impact than the reverse.
- When using a layering composite kit for the first time, select posterior teeth without great esthetic demands to become accustomed to the layering characteristics of the system.



Sectional Matrices

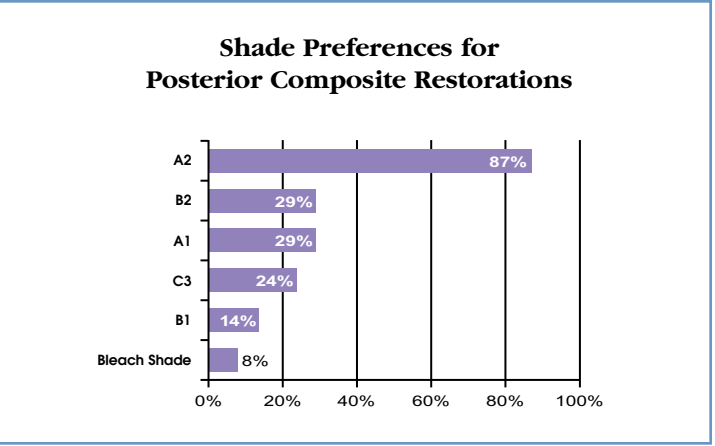
Sectional matrix systems (**Composi-Tight Silver Plus/Garrison Dental Solutions**; **Composi-Tight Gold/Garrison Dental Solutions**) assure tight interproximal contacts. The retainer rings assist in retraction and isolation so cotton rolls can be secured under both sides of the arch. Burnishing the surface of the bands following placement of the bonding agent and before addition of composite further assists in providing tight contacts and helps prevent bonding of the composite to the band.

Placement Instruments

Placement instruments for composite restorations are generally blades for anterior use or pluggers for posterior use. Multifunctional instruments combine a double-ended plugger, ball, and carving tip (**Super Plugger/Cosmedent**; **Universal Instrument/Garrison Dental Solutions**). Titanium nitride coatings over stainless steel reduce sticking of composite to the instrument. Recently, anatomical placement instruments (**CompoRoller/SDS/Kerr**; **OptraSculpt/Ivoclar Vivadent**) have become available.

Tips for Layering of Composites

- Use broad facial bevels to maximize blending of a shade transition.
- Use layers of dentin, enamel, and translucent composite to replicate a natural tooth. The appearance of the finished restoration results from the thicknesses of each of the underlying composite shades. A dentin layer should be thickest at the cervical portion of the tooth, imparting a higher chroma.
- Use opaque shades to block light transmission, mask dark areas of the tooth, and lighten the tooth (increase value). This layer is helpful when old amalgams are replaced.
- Complete dentin replacement with a body shade, leaving uniform space for final layering.



- Place a translucent shade for the outer “enamel” layers on lingual, proximal and facial surfaces. Enamel translucency should be most evident at the incisal portion of the tooth, imparting a lower value.
- Select the dentin shade to be one to two shades darker than the cervical shade of the tooth.
- Select the enamel shade from the incisal 1/3 of the tooth to be restored or from adjacent teeth.
- Translucent shades can mimic the edge of teeth between mamelons, where enamel is naturally thickest.
- If a dentin shade appears too dark during placement, it may be modified in the next incremental layer by using a lighter dentin body shade or a lighter enamel shade.
- Follow anatomy such as cusps, grooves, and pits in the layering process when adding incremental layers.
- For children, use a coarse diamond at slow speed on the facial surface after polishing to mimic surface texture of unworn enamel.
- Incorporate eccentricities using composite stains, if needed.
- Tints increase translucency, help increase coloration, and darken the tooth (decrease value).
- Color modifying kits for special characterization are available from several manufacturers (**Tescera Characterization Stain²/Bisco**; **Creative Color/Cosmedent**; **Kolor + Plus/SDS/Kerr**; **Tetric Color/Ivoclar Vivadent**).
- Cure each layer separately to reduce polymerization shrinkage stresses.

Posterior Composites

- Place 1- to 2-mm layers.
- Do not overfill. If reduction is needed, use a fine diamond.
- Use an anatomical condenser dipped in unfilled resin to obtain proper contours.
- Check occlusion, then finish and polish.

² Previously known as **BisColor**

Update on Composites *continued*

Polishing

Advances in fillers of resin composites have resulted in restorations with smoother surfaces and higher gloss. Surface roughness (µm) is measured by a profilometer with smaller values indicating a smoother surface. Gloss (GU) is measured by a gloss meter with higher values indicating a glossier surface.

Although a Mylar matrix still produces the smoothest and glossiest surface, modern polishing systems produce smooth and glossy surfaces with fewer steps. ■



POGO/Enhance Finishing & Polishing System – Complete Kit
(DENTSPLY Caulk)

Surface Roughness (µm) of a Composite after Polishing*

Polisher	Esthet•X
PoGo/DENTSPLY Caulk	0.07 µm
Astropol/Ivoclar Vivadent	0.12
Sof-Lex/3M ESPE	0.13

*Lower values indicate smoother surface

Gloss (GU) of Composites after Polishing*

Finish	Mylar	fini ¹
Simile	82	73 GU
Esthet•X	87	52

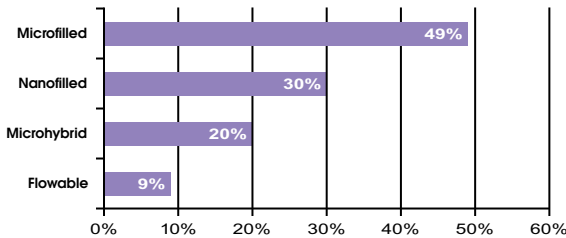
*Higher values indicate glossier surface
¹Pentron Clinical Technologies, LLC

Gloss (GU) of a Nanofilled Composite after Polishing*

Finish	Esthet•X
PoGo/DENTSPLY Caulk	78 GU
Astropol/Ivoclar Vivadent	60
Sof-Lex/3M ESPE	60

* Higher values indicate glossier surface

Types of Composites
Our Consultants Believe Polish Best



Preferred brand of polishing system for anterior composites

3M ESPE Sof-Lex Finishing and Polishing System/3M ESPE Super-Snap/Shofu Dental
Enhance Finishing and Polishing System/DENTSPLY Caulk CompositPro Universal Polishers/Brasseler USA

Preferred brand of polishing system for posterior composites

CompositPro Universal Polishers/Brasseler USA
Enhance Finishing and Polishing System/DENTSPLY Caulk PoGo/DENTSPLY Caulk
PDQ Composite Polisher/AXIS Dental

Product Update

BioSonic US100R from Coltène/Whaledent (800.221.3046 • www.coltenewhaledent.com) is an improved version of the **BioSonic US100** ultrasonic scaler originally evaluated in Volume 18, No. 2, March 2001. The **BioSonic US100R** has an improved water regulator to prevent insert “pop-outs,” improved one-turn controls, and advanced auto-detection circuitry that enhances the ability to use 25 kHz and 30 kHz inserts with no additional switches or setup necessary. This advanced circuitry automatically identifies which insert is being used. The compact footprint of the unit and small foot pedal for activation remain the same, and the new unit keeps the popular “turbo” button for immediate switching to maximum power. When in the “turbo” mode, the unit maintains constant maximum power and is not adjustable. The power and water control knobs were redesigned so that both turn in a clockwise direction. ■

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*Twenty-four Years of
Ceramic Restorations*

JOHN M. POWERS, PhD
*Self-etching/Adhesive Bonding
and Cementation – What's New*

TERRY D. MYERS, DDS
*Evaluating Dental Lasers:
What the Clinician Should Know*

JOHN A. MOLINARI, PhD
Approach to Hand Hygiene

PLUS:
*An all-day Hands-on for
hygienists and dental assistants!*

DENTISTS will spend the day with four renowned and highly respected speakers in the field of dentistry: Dr. John W. Farah and Dr. John M. Powers, co-founders and editors of THE DENTAL ADVISOR; Dr. Terry D. Myers, co-inventor of the world's first true dental laser; and Dr. John A. Molinari, co-author of *Practical Infection Control in Dentistry*. These four educators will share their knowledge and experience in the fields they have mastered, and will include state-of-the-art research findings, new technology, clinical techniques, product information, and recommendations.

HYGIENISTS and **DENTAL ASSISTANTS** will spend the day with three of the area's top dentists learning how to use the newest dental products. This interactive program will provide attendees with the most recent information on bleaching, impressions, cementation, and sealants. Each participant will receive a gift bag of dental products! Attendance is limited, so register quickly to reserve space.

Participants will also have an opportunity to meet with representatives from several of the top dental manufacturers. For complete information, or to **REGISTER** for this valuable seminar, visit www.dentaladvisor.com or call **800.347.1330**, ext. **103** today!

Thank you to our generous sponsors for supporting this educational program: **3M ESPE, Alpha Dental Studio, Bisco, Coltène/Whaledent, Den-Mat, DENTSPLY Caulk, Garrison Dental Solutions, GC America, Inc., Ivoclar Vivadent, Kuraray America, Inc., Nellmar Laboratory, Premier Dental Products Co., Pulpdent Corporation, Sultan Healthcare, Inc., Ultradent Products, Inc., Whip Mix Corporation, Zenith Dental, and Zhermack, Inc.**

THE DENTAL
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3M ESPE Filtek Supreme Plus Flowable Restorative + + + + +

3M ESPE
800.634.2249
www.3MESPE.com

Description

3M ESPE Filtek Supreme Plus Flowable Restorative is a low-viscosity, light-cured, radiopaque composite. It is indicated for the restoration of minimally invasive cavity preparations, base or liner under direct restorations, repair of small defects in esthetic indirect restorations, pit and fissure sealants, block-out of undercuts, and repair of resin and acrylic temporary materials. The introductory kit contains five, 2-g syringes of **Filtek Supreme Plus Flowable** in shades A2, A3, A3.5, OA3, and W, plus 20 dispensing tips. There is a two-year shelf life at room temperature. Twelve shades that correspond to the **3M ESPE Filtek Supreme Plus Universal Restorative** are available (A1, A2, A3, A3.5, A4, B1, B2, C2, D2, OA3, W and XW). This product was evaluated by 14 editors in 200 restorations during a four-week period. This product received a 96% clinical rating.

Suggested Retail Cost

- \$139.40/introductory kit

Editors' Observations

Manufacturer's Instructions

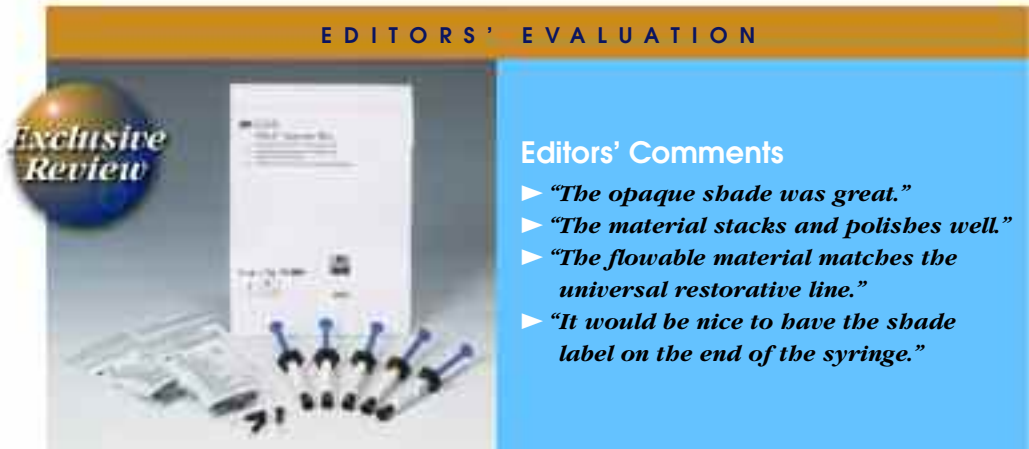
The manufacturer's instructions for proper use of this flowable composite are clear and concise.

Packaging

The syringes are individually boxed and pre-bent disposable application tips are also included. Each syringe is labeled with the shade and curing time. Adding shade labels to the ends of the syringes would facilitate identification when stored vertically in a rack.

Viscosity of Composite/Ease of Placement

The composite flows smoothly into a preparation without being runny. It can be stacked easily on previous layers to reduce voids. Withdrawing an instrument after manipulation of **Filtek Supreme Plus Flowable** does not pull a tail of material behind it.



Shade Match Before and After Curing

The shade match before and after curing is consistent with the Vita shade guide. The OA3 shade provides an excellent opaque layer. A secondary shade can be used for refining the color match.

Ease of Finish and Polish

The material polishes well. The stackability of the material reduces the amount of polishing required because the material stays in the preparation.

Final Esthetics and Final Polish

The quality of the final polish and esthetics were the two highest rated categories during the evaluation. The material has a translucency that blends well with the surrounding teeth. It is easy to polish into a smooth, void-free restoration with rotary instrumentation and sanding strips.

Clinical Tip

- The OA3 layer can be used first to provide a uniform shade to build an esthetic restoration. OA3 can also be used to modify other shades if desired. ■

3M ESPE Filtek Supreme Plus Universal Restorative + + + + + 2006 Preferred Product

3M ESPE
800.634.2249
www.3MESPE.com

Description

3M ESPE Filtek Supreme Plus Universal Restorative is a light-cured composite indicated for direct anterior and posterior restorations. It may also be used for core build-ups; splinting; and indirect inlays, onlays, and veneers. It is filled 72% by weight with silica nano-clusters. The restorative material is supplied in 4-g syringes and 0.2-g unit-dose capsules. **Filtek Supreme Plus** maintains the same physical properties of the original **Filtek Supreme** with some enhancements. Twenty-six of the shades have been updated for easier shade matching and the shade wheel has been improved. The opacity has been maintained and the value increased. Thirty-five shades are available, including four translucent, three white and two extra-white shades. The introductory kit evaluated contained 10, 0.2-g unit-dose capsules each of **Filtek Supreme Plus** in shades A1B, A2B, A3B, A3D and A2E. Also included in the kit were 40, **3M ESPE Adper Prompt L-Pop**, a shade selection wheel, technique guides, and an instruction card. To provide depth to restorations a clear, translucent shade is available separately. The translucent shades are radiolucent. Seventeen editors evaluated **Filtek Supreme Plus Universal** in over 500 restorations during a four-week period. This product received a 97% clinical rating.

Suggested Retail Cost

- \$338.00/introductory kit

Editors' Observations

Manufacturer's Instructions

The manufacturer's instructions are clear and complete for easy use of the product.

Packaging

The unit-dose capsules are packaged in spill-proof plastic bottles that keep the individual capsules separate and easy to handle.

Viscosity of Composite/Stickiness of Material

The viscosity is ideal, allowing for the material to be placed into a preparation without slumping. There is some slight stickiness, but it adheres well to the tooth and releases from the placement instruments.



Shade Match Before and After Curing

The shade match before and after curing is consistent with the Vita shade guide and the shade remains true after curing. The shades correspond with the **3M ESPE Filtek Supreme Plus Flowable Restorative**, simplifying color matching.

Blending and the Value of having Dentin/Body/Enamel/Translucent Shades

Blending with the tooth is accomplished with the selection of translucent shades. The body and enamel shades have a good chameleon effect. The included shade wheel indicates suggested shade formulas in one, two, or more shade combinations.

Ease of Finish and Polish

The material is easy to finish with fine diamonds and polishes well. Various polishing systems produce a smooth, glossy surface.

Final Esthetics and Final Polish

The quality of the final polish and esthetics rated very highly. The material has a translucency that blends well with the surrounding teeth. It is easy to polish into a smooth restoration with rotary instrumentation and sanding strips.

Clinical Tip

- Use the dentin shades or OA3 shade of **Filtek Supreme Plus Flowable** if masking is needed. ■

AXCEL FLOW + + + +

Tri Dental Innovators
877.834.3368 • 714.554.1170
www.TDIdental.com

Description

AXCEL FLOW is a light-cured flowable composite designed for use in direct restorations, repair of ceramics, and repair of provisional restorations. **AXCEL FLOW** is filled 39% by volume and is radiopaque. It may be used with all conventional light-cured bonding systems and is available in 16 classic Vita shades along with XL (bleach), clear (translucent), and universal opaque. **AXCEL FLOW** is also available in six shades (A1, A2, A3, B1, XL, Clear) of a high viscosity (HV) version for more stackability. The custom kit evaluated contains 1.5-g syringes of A1, A2, and B1; 20 dispensing tips; and instructions. Twenty-six consultants evaluated **AXCEL FLOW** in over 300 restorative cases. This product received an 86% clinical rating.

Suggested Retail Cost
• \$29.99/three-syringe kit

Product Features

Overall, **AXCEL FLOW** received very good ratings. Similar to other flowable composites, the material is easy to dispense from the syringe and allows for good intraoral access. The most-liked features of the material were flowability into



Consultants' Comments

- ▶ "It works well as a Class I/Class II liner."
- ▶ "Excellent for use in undercuts due to wettability."
- ▶ "Good flow for sealing narrow pits and fissures."
- ▶ "Light cure quickly before it flows away from where it was placed."
- ▶ "Place a label on the syringe plunger for easier identification of shade."

small areas, tooth wettability, and final shade match. Minimal sensitivity to ambient light was noted. The composite received positive ratings for blending with teeth and having a good balance of translucency and opacity. Also, ease of finishing and polishing and the quality of the final polish were all rated very good. A concern of many consultants was the material's low viscosity, resulting in limited stackability for Class III, IV, and V preparations. With low viscosity, consultants concurred with the manufacturer's instructions that the plunger should be pulled back after use to minimize flow of excess material. Fifty-two percent of consultants rated **AXCEL FLOW** to be equivalent to or better than their current multi-purpose flowable composite. Forty percent indicated that they would switch to **AXCEL FLOW**, and 76% would recommend the product to a colleague. ■

Editors' Note: During this evaluation, the manufacturer changed the name of this product to **AXCEL FLOW**. It was originally known as **AXIOM FLOW**.



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AXCEL Universal Restorative + + + +

Tri Dental Innovators
877.834.3368 • 714.554.1170
www.TDIdental.com

Description

AXCEL Universal Restorative is a hybrid composite that combines radiopaque inorganic and nano-silica fillers. The filler load is 57% by volume with an average particle size of 0.75 µm. The material is indicated for both anterior and posterior direct composite restorations and is supplied in both traditional 4-g syringes and 0.2-g single-dose capsules. Sixteen Vita enamel shades and XL (bleach) along with seven Vita dentin shades and an Incisal shade are available. The introductory kit contains one syringe or 20 capsules each of enamel shades A2, A3, A3.5, B1 and C2; two, 4-g syringes of etching gel; and a 6-ml bottle of **AXCEL Bond** along with accessories. Both the syringe and single-dose capsules were evaluated. Twenty-six consultants evaluated **AXCEL Universal Restorative** in 467 clinical applications. This product received an 86% clinical rating.

Suggested Retail Cost
• \$189.99/introductory kit



Consultants' Comments

- ▶ "Stays put and does not slump."
- ▶ "Handles and packs well."
- ▶ "Posterior esthetics are good following the shade shift."
- ▶ "The bonding agent is too viscous."
- ▶ "Syringes should have distinct labels or color coding to differentiate shades."

Product Features

Consultants preferred **AXCEL Universal Restorative** in the single-dose capsules over syringe delivery due to the ease of use. The composite has a no-slump viscosity, is sculptable, and stays where it is placed. It offers slight resistance to packing but was reported to stick to instruments during manipulation. The composite shades are quite opaque before curing. A shade shift occurs on curing, creating more translucency, which improves the shade match and blending with the tooth. The translucency is adequate for posterior restorations but is insufficient for anterior esthetic restorations. The cured composite can be finished with multi-fluted carbides or diamonds and polishes to a luster like a microfilled composite. Fifty-two percent of consultants rated **AXCEL Universal Restorative** equivalent to or better than their current composite and 62% would recommend it. ■

Editors' Note: During this evaluation, the manufacturer changed the name of this product to **AXCEL Universal Restorative**. It was originally known as **AXIOM Universal Restorative**.

SENIOR CLINICAL CONSULTANTS

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J. Allen, MI
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R. Averbach, CO
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M. Bannan, MI
D. Barnes, MD
F. Berman, PA
M. Beyramian, MI
L. Bishop, MI
J. Bostic, OH
D. Bowen, MI
E. Bowser, PA
R. Bozell, MI
M. Braverman, NY
L. Brimhall, MT
M. Briskin, NY
C. Brown, LA
L. Brown, MI
W. Brownscombe, MI
H. Buckwald, NJ
J. Bush, PA
H. Cadorette, MI
Z. Campbell, MI
P. Campo, NY
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D. Chacko, TN
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R. Dost, VA
J. Doueck, NY
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R. Engle, IL
K. Fairbanks, MI
T. Faiver, MI
R. Fay, TX
N. Fehmi, MI
M. Feinberg, NY
L. Feldman, NJ
J. Fine, NJ

OptraPol + + + + ½

Ivoclar Vivadent, Inc.
800.533.6825 • 716.691.0010
www.ivoclarvivadent.us.com

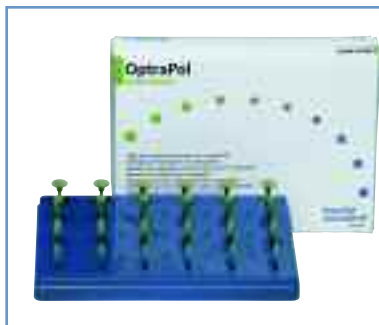
Description

OptraPol is a one-step polisher specifically designed for use on direct placement composite restorations. The polishing tips consist of latex, silicone carbide, aluminum oxide, titanium oxide, and iron oxide and are mounted on stainless steel, latch-type mandrels. **OptraPol** polishers are reuseable and may be sterilized in an autoclave. The polishers are run at speeds of 10,000-20,000 rpm with copious water spray. The **OptraPol** assortment kit contains six each of the following shapes: flame, small flame, cup, and disk. **OptraPol** was used by 27 consultants to polish over 675 restorations. This product received a 92% clinical rating.

Suggested Retail Cost
• \$110.00/kit

Product Features

Packaging of **OptraPol** is neat and secure in a covered storage tray. Selection from the variety of shapes is facilitated by a transparent cover on the tray. The multiple



Consultants' Comments

- ▶ "Good variety of shapes covered many applications."
- ▶ "Effective polisher in one step."
- ▶ "Able to sterilize and reuse."
- ▶ "Leaves a green residue on the composite surface when used without water."
- ▶ "Mandrels too long for some posterior use."

shapes were appreciated and seemed to fit a variety of applications. Polishers have sturdy construction for durability after repeated use and sterilization. A consequence of the bulk is minimal flexibility for polishing grooves and embrasures. Overall, polishing with this one-step polisher produces acceptable results for posterior applications, but high gloss is not consistently achieved. Sixty-four percent of consultants rated **OptraPol** equivalent to or better than the material they were currently using, while 78% would recommend it and 62% would switch to **OptraPol**.

Clinical Tips

- Copious water irrigation with consistent, medium pressure and moderate speed produces the best results with **OptraPol**.
- Use of polishing paste is not recommended. ■

CoolBlue Professional Tooth Whitening System + + + ½

Milestone Scientific
800.862.1125 • 973.535.2717
www.milesci.com

Description

CoolBlue Professional Tooth Whitening System combines a light-activated in-office tooth whitening gel with a take-home maintenance kit. The whitening gel is activated with the **CoolBlue Wand**, an LED curing light with four interchangeable tips (whitening, composite curing, trans-illuminating, and tacking). The whitening tip contains an array of LEDs in a crescent shape to cover the entire quadrant. The in-office whitening gel contains 35% hydrogen peroxide with a photo-activator, which requires a 10-second light activation per quadrant. Following light activation, the gel remains on the teeth for approximately 30 minutes. The treatment may be applied one, two or three times per appointment. The patient post-treatment maintenance kit is a whitening spray that is

Consultants' Comments

- ▶ "The light activation time is very short."
- ▶ "The different light tips are useful for other restorative procedures."
- ▶ "The whitening gel and the accelerator do not mix easily."
- ▶ "Shade changes after one application did not meet patients' expectations."

applied directly to the teeth, eliminating the need for whitening trays. Each **CoolBlue** whitening kit contains three, 5.5-ml syringes of whitening gel; 3 tubes of accelerator; 1.2-ml syringe of gingival barrier; mixing jars; the patient spray maintenance kit; and accessories. Five consultants used **CoolBlue Professional Tooth Whitening System** in 72 clinical cases. This product received an 81% clinical rating.

Alpha-Flow + + + +

Dental Technologies, Inc
800.835.0885 • 847.677.5500
www.dentaltech.com

Description

Alpha-Flow is a light-cured, flowable microhybrid composite. The material contains 38% (by volume) micro- and nano-fillers, is radiopaque and contains fluoride. **Alpha-Flow** is also fluorescent. It is indicated for use in small Class I and II restorations in non-load-bearing areas, Class III and V restorations, tunnel preps, blocking out of undercuts, composite repairs, and relining or repair of temporary restorations. It is available in 10 shades plus an opaquer. The kit evaluated contained four, 1.5-g syringes in shades A2, B2, C3, and Universal Opaquer plus 20 dispensing tips. Curing time is 40 seconds for increments of 2 mm or less. Twenty-six consultants evaluated **Alpha-Flow** in over 500 applications. This product received an 86% clinical rating.

Suggested Retail Cost
\$29.95/kit



Consultants' Comments

- ▶ "Flows well to seal grooves."
- ▶ "Cured composite is highly opaque."
- ▶ "Store syringes with tips down to minimize bubbles in the material."
- ▶ "Long curing time."

Product Features

The flowable viscosity of **Alpha-Flow** makes it ideal for application into narrow preparations. The inclusion of fluoride was of value to consultants who used the material to seal pits and fissures and line the proximal boxes of Class II restorations. The radiopacity of **Alpha-Flow** was rated as very good to excellent. Dispensing of the material often yields air bubbles, and composite continues to ooze from the syringe after pressure on the plunger is released. Shades are fairly opaque, which is more evident in thicker layers. Overall, the composite finishes well, resulting in smooth restorations. Fifty-four percent of consultants would recommend **Alpha-Flow** and 40% would switch to it or add it to the present selection in their office. ■

Suggested Retail Cost

- \$995.00/light
- \$79.95/single-use procedure kit

Product Features

Each patient kit is complete and contains enough material for three applications. The **CoolBlue Wand** is lightweight, with rotating tips and an automatic 10-second on/off pulse. The ease of using the light and the short time required to activate the gel were rated as very good. Some consultants reported that the gingival barrier was thin and did not cure sufficiently with the **CoolBlue Wand**, regardless of the tip used. Mixing of the whitening agent with the accelerator produced a gel with a low viscosity that was difficult to control during placement on the teeth. Only minor tooth and

gingival tissue sensitivity were reported during the treatment. The average shade change was five to six shades on the Vita value-arranged scale. Results ranged from four to 10 shades whiter. Best results were obtained when two to three applications were used. The patients were divided on the effect of the whitening procedure, with some satisfied and some disappointed with the results. The patients did not rate the taste of the materials very highly and reported that the take-home maintenance spray was messy and burned when it contacted the soft tissues. Twenty percent of consultants would switch to and recommend **CoolBlue Professional Tooth Whitening System**. ■

CLINICAL CONSULTANTS

K. Fischer, IN
S. Galster, ND
D. Garber, CA
R. Gardner, MI
N. Garlisi, OH
L. Gee, OK
A. Giovanardi, MI
J. Glick, MI
B. Goldsmith, NY
I. Goldstein, NJ
K. Goodman, MI
S. Graber, IL
A. Gray, MI
W. Gregory, MI
D. Griggs, OH
P. Gronet, GA
J. Grover, MI
B. Gursky, MI
E. Gutman, NY
D. Haas, Canada
H. Hamerink, MI
S. Harden, GA
B. Herrmann, CA
R. Hervig, KS
M. Hewko, OH
S. Hoekman, MI
S. Hondrum, GA
J. Hoste, MI
M. Hovel, WI
S. Hutt, NJ
P. Indianer, MI
G. Isaacson, NJ
S. Isaacson, NJ
J. Jacobs, NY
J. Jaghab, MI
I.F. Jarjoura, MI
N. Johnson, MN
T. Jowett, KS
D. Juliani, MI
C. Kamin, OH
J. Kaminski, MI
T. Kaminsky, PA
D. Kaplan, NY
M. Kastner, OH
S. Kelly, OH
D. Keren, NY
J. Kim, NY
B. Klym, MI
J. Kostohryz, TX
J. Kotapish, OH
J. Kotnour, WI
M. Kruscke, MI
F. Leal, VA
S. Lever, MD
I. Levine, NY
R. Lezell, MI
R. Lieder, MI
M. Livernois, FL
J. Lockwood, MI
M. Lodge, MI
M. Man, NY
B. Manne, FL
N. Mansour, MI
N. Markarian, CA
D. Marsh, MI
M. Mason, NY
R. Mason, NY
W. Mason, MI
J. Mayer, OH
C. McLaren, MI
J. McLaren, MI
J.R. Meagher, NY
J. Mikesell, IL
C. Miller, PA
S. Miller, NV
R. Mizrahi, NY
L. Montes, NY
D. Montgomery, CA
P. Moratto, MD
M. Morin, MI
S. Munro, WI
W. Nagy, TX
J. Nash, MI
A. Nazarian, MI
N. Nealis, IL
L. Neuberger, ND
C.J. Noe, MD
E. Odenweller, OH



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THE DENTAL ADVISOR **Education Center**, located in Ann Arbor, Michigan, is a new resource for continuing education in dentistry. Our **Education Center** is specifically designed to provide an intimate and comfortable atmosphere for attending lectures and hands-on programs.

Scheduled courses include six *Master's Series* programs designed to offer dental professionals an opportunity to expand their knowledge in key areas of dentistry. Prominent speakers will present one-hour programs on the latest products and techniques for immediate implementation into everyday practice. Programs include *Impression Materials*, *All-ceramic Restorations*, *Bonding Agents*, *Resin Cements*, and *Endodontic Systems*. Participants will have an opportunity to work with products first-hand and visit with dental manufacturer sponsors! Each course is 1 CE credit (AGD/Pace Provider) and includes a light meal.

Other scheduled courses include two highly informative presentations – *The Anatomy of the Dental Malpractice Suit* and *The Dental Patient: Friend or Foe?* Attorney, Keith Felty, presents crucial information in the areas of professional liability and dental malpractice. You can not afford to miss either of these programs! Each course is 2 CE credits (AGD/Pace Provider) and includes a light meal.

For more information or to register for these informative programs, please contact the Director of Education, Annette Frederick at 734-665-2020, ext. 106, or email annette@dentaladvisor.com.



www.dentaladvisor.com

John M. Powers, PhD

Master's Series

Dental Materials for the 21st Century: Impression Materials

Wed., Sept. 13, 2006, 6 p.m. – 8 p.m.

New impression materials will be reviewed with an emphasis on advances in addition silicones, polyethers, and hybrid impression materials. Properties that affect clinical performance will be discussed. (1 CE Credit)

Course Fee: \$50 (Register for four or more *Master's Series* programs at \$40 each!)

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John W. Farah, DDS, PhD

Master's Series

Successful All-ceramic Restorations: A 24-year Report

Wed., Oct. 11, 2006, 6 p.m. – 8 p.m.

How to prepare teeth to get long-term clinical success of ceramic restorations. A variety of clinical cases shown will be highlighted. Success and failure rates of ceramic restorations will be outlined. (1 CE Credit)

Course Fee: \$50 (Register for four or more *Master's Series* programs at \$40 each!)

Keith Felty, JD

The Anatomy of the Dental Malpractice Suit

Tues., Jan. 9, 2007, 5:30 p.m. – 8:30 p.m.

This program will provide an understanding of the legal process related to claims involving dental malpractice. Topics will include the role of the defense attorney, the judge and jury, and why the dentist prevails in nearly every case that actually goes to trial. (2 CE Credits)

Course Fee: \$250

Keith Felty, JD

The Dental Patient: Friend or Foe?

Fri., Jan. 19, 2007, 8:30 a.m. – 11:30 a.m.

This program will delve into potential legal claims against dentists and how they may be avoided. Claims often arise from breakdowns in communication with the patient. Various communication methods will be discussed to reduce the risk of a malpractice suit. (2 CE Credits)

Course Fee: \$250

John M. Powers, PhD

Master's Series

Dental Materials for the 21st Century: Bonding Agents

Wed., Feb. 7, 2007, 6 p.m. – 8 p.m.

Total-etch and self-etch bonding agents will be reviewed with an emphasis on 6th- and 7th-generation bonding systems. Variables that affect bonding clinically will be discussed. (1 CE Credit)

Course Fee: \$50 (Register for four or more *Master's Series* programs at \$40 each!)

Sponsored by: **DENTSPLY Caulk**

Peter Yaman, DDS, MS

Master's Series

To Post or Not Post Endodontically Treated Teeth

Wed., Mar. 7, 2007, 6 p.m. – 8 p.m.

Endodontically treated teeth are compromised relative to the amount of remaining tooth structure and therefore require additional retentive features for successful restoration. The clinician needs to understand the philosophy and principles for post and core construction and recognize the options available for auxiliary retention. Selection of the most appropriate post and core material for a specific clinical situation, cast metal, amalgam, composite or glass ionomer will be reviewed and discussed. (1 CE Credit)

Course Fee: \$50 (Register for four or more *Master's Series* programs at \$40 each!)

Keith Felty, JD

The Dental Patient: Friend or Foe?

Tues., Mar. 13, 2007, 5:30 p.m. – 8:30 p.m.

This program will delve into potential legal claims against dentists and how they may be avoided. Claims often arise from breakdowns in communication with the patient. Various communication methods will be discussed to reduce the risk of a malpractice suit. (2 CE Credits)

Course Fee: \$250

Keith Felty, JD

The Anatomy of the Dental Malpractice Suit

Fri., Mar. 23, 2007, 8:30 a.m. – 11:30 a.m.

This program will provide an understanding of the legal process related to claims involving dental malpractice. Topics will include the role of the defense attorney, the judge and jury, and why the dentist prevails in nearly every case that actually goes to trial. (2 CE Credits)

Course Fee: \$250

John M. Powers, PhD

Master's Series

Dental Materials for the 21st Century: Resin Cements

Wed., April 11, 2007, 6 p.m. – 8 p.m.

New resin cements will be reviewed with an emphasis on self-adhesive resin cements. Properties that affect clinical performance will be discussed. (1 CE Credit)

Course Fee: \$50 (Register for four or more *Master's Series* programs at \$40 each!)

Sponsored by: **DENTSPLY Caulk**

Darren Marsh, DDS

Master's Series

Endodontic Systems for the General Dentist

Wed., May 9, 2007, 6 p.m. – 8 p.m.

Rotary instrumentation techniques and carrier based obturation systems will be reviewed with an emphasis on the properties that affect clinical performance. (1 CE Credit)

Course Fee: \$50 (Register for four or more *Master's Series* programs at \$40 each!)



CLINICAL CONSULTANTS

R. Oshrain, NY
J. Paris, TX
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D. Parsons, NY
M. Patel, MI
T. Paumier, OH
L. Perratto, NY
S. Picazio, NJ
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D. Pietz, NC
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LABORATORY CONSULTANTS

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Description

Hydrogum 5 is a dust-free alginate formulated with five-day dimensional stability, five-second water absorption and a five-year shelf life. It is an extra-fast setting material with a lilac color and tropical fruit flavor.

Hydrogum 5 is indicated for study casts, removable prostheses, opposing casts, and temporary crown and bridge templates. The five-second water absorption permits quick incorporation of the powder and water during mixing and a high flow rate of the mixed material. The working time is 1:05 with an intraoral setting time of 45 seconds.

When stored properly, pouring of casts may be delayed up to five days. The alginate is packaged in foil bags for stability of the powder before opening.

Hydrogum 5 is available in unit-dose, 454-g and 908-g packages. The 454-g bag with water cup and powder scoop was evaluated. Twenty-six consultants evaluated **Hydrogum 5** in 267 impressions. This product received a 92% clinical rating.



Consultants' Comments

- ▶ "No bubbles – excellent impressions."
- ▶ "Detail on cast is very good."
- ▶ "Didn't stick to teeth – I loved it!"
- ▶ "Good viscosity – no slumping."
- ▶ "Patients liked the fruit scent, but noted little or no taste."
- ▶ "I would like this material to have a color-change feature."

Suggested Retail Cost

- \$13.10/454-g bag, storage can, and measuring set
- \$25.70/two, 454-g bags, storage tub, and measuring set
- \$10.99/454-g bag
- \$0.79/21-g unit dose

Product Features

The lack of dust is immediately noticeable during the dispensing and mixing of the material. The **Hydrogum 5** powder and water are easily mixed in 30 seconds to produce a smooth, creamy, and flowable viscosity. The material has an adequate working time. The fast intraoral setting, along with the tropical fruit flavor, enhance patient comfort. When set, **Hydrogum 5** has a firm consistency with very good detail reproduction, resulting in high-quality casts. Eighty-eight percent

of consultants rated **Hydrogum 5** equivalent to or better than the alginate they were currently using and would recommend this product, while 79% would switch to it.

Clinical Tip

- If pouring of the cast is delayed, store the impression in a humid environment. Use a moist paper towel in an airtight container such as a zip-close plastic bag. ■

Upcoming Lecture Schedule

Shared Secrets:

Enhance Your Practice with Esthetic Dentistry's "Best Kept Secrets"

John W. Farah, D.D.S., Ph.D., Editor

7-Credit C.E. Course

Nov. 10, 2006

Feb. 9, 2007

April 18, 2007

THE DENTAL ADVISOR: Empower Your Practice – Ypsilanti, MI

27th Annual Hawaiian Dental Forum – Maui, HI

Extramural Continuing Education Dept of the Univ of Pennsylvania, School of Dental Medicine – Neptune, NJ

Ms. Tricia Price – (734) 665-2020

Dr. David Crane – (715) 723-1662

Dr. Charles A. Kosteva – (610) 865-6999

Invite Dr. Farah to be your next guest speaker!

For information on attending a lecture or scheduling Dr. Farah to speak to your dental group, please contact:

Ms. Tricia Price at 734.665.2020 or 800.347.1330, tricia@dentaladvisor.com

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