

THE DENTAL ADVISOR™

Improving Patient Care Through Research & Education

July-August 2017

Vol. 34, No. 4

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2017 CLINICAL

PROBLEM
SOLVERS

www.dentaladvisor.com

RATINGS:

Excellent + + + + +

Very Good + + + +

Good + + +



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2017

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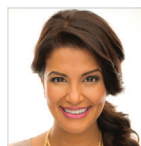
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As a member of the editorial board and clinical evaluator at THE DENTAL ADVISOR, I feel fortunate to be well-versed in a broad range of dental products that reach the market. Because of this unique position, I look forward to offering this issue of Clinical Problem Solvers each year to our subscribers. This issue allows us to recommend products which we have found to solve very specific problems or address previously unresolved issues in dentistry.

We know that individual practicing dentists face an over-abundance of products (new and old) to choose from on a daily basis and limited time and resources can hinder the ability to thoroughly investigate the claims of manufacturers. It gives us genuine pleasure to be able to combine our experiences as practicing dentists and clinical evaluators to offer you this list of go-to products that truly solve clinical problems.

While we all have our own opinions regarding individual products, this issue more directly offers you our advice on how these products can be utilized to overcome a specific challenge.

I hope you find these suggestions useful, and please keep your own recommendations coming! As always, you may reach me at drbunek@dentaladvisor.com.

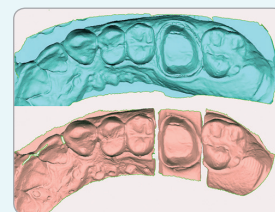
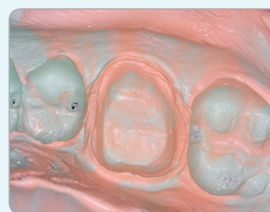
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Flexitime Fast & Scan Kulzer, LLC



www.kulzerUS.com
Clinician: Dr. Lori K. Brown



CLINICAL PROBLEM: At times, my intra oral scanner cannot capture the detail for an impression, and since my laboratory is using a digital scanner, I need an impression material that is scannable to minimize production time for the lab.

SOLUTION: *Flexitime Fast & Scan* is available in several viscosities and no powder is required to obtain a scan of the impression. Labs love this feature! *Flexitime Fast & Scan* was tested by THE DENTAL ADVISOR in a comparative report and offered excellent accuracy and a precision fitted crown. Using an impression material that is easily read by dental scanners improves and enhances the design process and the final restoration.

Harmonize™

Kerr Restoratives



www.kerrdental.com
Clinician: Dr. Sabiha S. Bunek



CLINICAL PROBLEM:

Most composites are a bit sticky and require the use of a wetting agent to help manipulate the material.



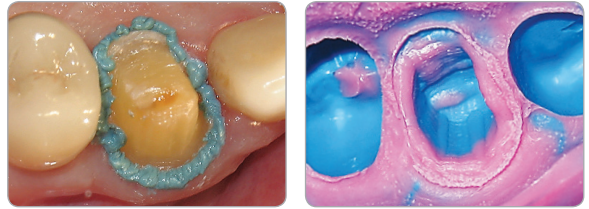
SOLUTION: *Harmonize™* is truly unique in the way it handles; soft yet sculptable, without being sticky. No wetting agent needed. The wide range of esthetic shades make it suitable for layering in both the anterior and posterior region. Another favorite feature is the ability to obtain a glass-like finish, resulting in a restoration that is undetectable with the surrounding dentition.

Astringent Retraction Capsule

3M



www.3M.com/dental
Clinician: Dr. Gary Bloomfield



CLINICAL PROBLEM:

When mild retraction is required, packing cord is time consuming and tedious.



SOLUTION:

3M Astringent Retraction Capsule works wonders in cases where I need mild retraction and/or in cases where I simply need a hemostatic agent that leaves the tissues clean and dry. The capsule has a unique tip that fits directly into the sulcus and is comfortable to the patient. The paste flows into the sulcus and washes out easily. The resultant impression provides clear margins and crowns fit perfectly!

Adhese® Universal VivaPen

Ivoclar Vivadent



www.ivoclarvivadent.com
Clinician: Dr. Sabiha S. Bunek

CLINICAL PROBLEM:

Throughout the day, I notice the amount of bonding agent dispensed is either insufficient, requiring my assistants to dispense more, or too much and wasteful.



SOLUTION: *Adhese Universal VivaPen* automatically dispenses bonding agent with the click of a button, eliminating any guesswork from the equation. The assistant can still prime the pen so that it is ready for the clinician to use. If more than one drop of bond is needed for multiple restorations, it is only a click away. *Adhese Universal* is a versatile material that can be used with all etching techniques in both direct and indirect procedures. Nothing beats the VivaPen design!



Riva Luting Plus

SDI Dental, Inc.



www.sdi.com.au
Clinician: Dr. Ara Nazarian

CLINICAL PROBLEM:

As zirconia restorations become increasingly popular, clinicians are seeking a luting cement that is easy and predictable to implement.



SOLUTION:

Riva Luting Plus is a resin modified, self-curing, glass ionomer luting cement that can be used without requiring special preparation using cleaning agents nor does it require any bonding agents. It is an ideal cement not only for zirconia, but also metal, porcelain fused to metal and resin crowns and bridges. **Riva Luting Plus** utilizes proprietary IonGlass™ filler that is a radiopaque, high ion releasing, and antimicrobial against several cariogenic bacteria with a very low film thickness of only 10 microns.



Most importantly, **Riva Luting Plus** chemically bonds to dentin, enamel and all types of core material.

Tetric Evo Line

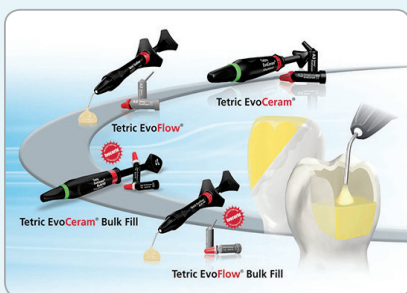
Ivoclar Vivadent



www.ivoclarvivadent.com
Clinician: Dr. John W. Farah

CLINICAL PROBLEM:

I worry about mixing and matching composites in my clinical procedures. I'm not confident that using a flow-able from one company, a capping layer from another, and a light or adhesive from a third company will provide a complete cure.



SOLUTION:

Tetric Evo Line offers four direct composite products which complement each other in chemistry and performance. The **Tetric Evo Line** family works together, and when combined with **Adhese Universal**, offers strong, esthetic, long-term restorations. The bulk fill products contain the patented photo initiator Ivocerin™, which cures quickly and at a deep depth of cure. **Tetric Evo Line** offers a simple, reliable solution to dentists struggling with mixing and matching products in composite procedures. Remember, manufacturers test their products together (composites, adhesives, curing lights, etc.) so they are proven to work successfully in sync with one another.

Ionolux®

VOCO America, Inc.



www.vocoamerica.com
Clinician: Dr. Sabiha S. Bunek



CLINICAL PROBLEM:

Restorative adhesive dentistry on pediatric patients can be stressful when trying to maintain a dry working field.

SOLUTION:

Ionolux is a resin modified glass ionomer restorative material that has become my go-to material for pediatric patients. The cavity preparation can be moderately dry and a conditioner or adhesive is not required prior to the placement of the filling. The material handles well - becomes immediately packable, not sticky, and once the filling is in place, the restoration can be light cured. **Ionolux** saves me time and keeps the little patients happy!

PALA Digital Dentures

Kulzer, LLC



www.kulzerUS.com
Clinician: Dr. Sabiha S. Bunek



CLINICAL PROBLEM:

Many clinicians choose not to treat edentulous patients due to lack of confidence in their clinical technique. Conventional denture fabrication is time consuming and tedious- taking at least five appointments.

SOLUTION:

PALA Digital Dentures use CAD/CAM technology to revolutionize denture production, and the try-in or final denture can be delivered in as few as *10 days. Clinicians are required to utilize a simplified impression technique that can be performed in one visit. **PALA Digital Dentures** digitally store the impression and the denture design in case of loss or damage. A new denture can be remade quickly and easily without the need for multiple appointments.

*Turnaround time will be dependent on geographic location and your partner laboratory's scanning turnaround time.

Maxcem Elite™ Chroma

Kavo Kerr



www.kerrdental.com
Clinician: Dr. Lori K. Brown



CLINICAL PROBLEM:

It's hard to know when the ideal time is to start removing excess cement after seating a restoration. If you wait too long, clean up can be a nightmare.

SOLUTION:

Maxcem Elite™ Chroma is the first self-adhesive resin cement with color changing chemistry that lets you know when the cement is ready for clean up. The cement dispenses pink but fades in color when it reaches its gel state, indicating the most ideal time to remove excess material. Once it is ready to remove, the excess cement peels off in one motion. This results in less discomfort to the patient and saves time... a game changer!

Bulk EZ™

Danville Materials



www.danvillematerials.com
Clinician: Dr. Sabiha S. Bunek

CLINICAL PROBLEM:

Bulkfill composites are a great adjunct to my armamentarium; however, I worry about the risk of not having complete polymerization of restorations in areas that the light cannot reach.



SOLUTION: Bulk EZ™

is a dual-cured, bulkfill composite with self-cure initiators that allow it to have an unlimited depth of cure, guaranteeing a complete cure even if your light cannot reach the base of your restoration.

It is compatible with all methacrylate-based dental bonding agents and is highly radiopaque. The material is offered in three VITA shades- A1, A2 and A3.



Obsidian PFM

Glidewell Laboratories



www.glidewell dental.com
Clinician: Dr. James Olsen



CLINICAL PROBLEM:

I like ceramic-metal bridges for restoring teeth in elderly patients, but I don't like the porcelain chipping and subsequent repairs I observe with many PFM systems.

SOLUTION:

Obsidian PFM ceramic-metal fixed bridges provide a strong and highly esthetic restoration for patients needing long span bridges. The beauty and vitality of the **Obsidian PFM** lithium silicate ceramic provides a perfect solution for even the most discriminating patient. Because lithium silicate is a stronger ceramic than the porcelains used in most PFM systems, I expect to observe less chipping and less wear. My patient was so impressed with the lower they want the upper done next!

Tapered Occlusal Reduction Diamonds

Meisinger USA, L.L.C.

www.meisingerusa.com
Clinician: Dr. John W. Farah



ISO#	828TG	828TO	828TY	828TB	828TR	828TW
Diameter	017	017	017	017	017	017
Length mm	1.5	1.8	2.0	2.2	2.4	1.0

Photos courtesy of Meisinger USA, L.L.C.

CLINICAL PROBLEM:

So many times after prepping posterior teeth I think I have enough reduction, and then to my surprise I get a call from the lab informing me that reduction is minimal.



SOLUTION: Tapered Occlusal Reduction Diamonds

guarantee adequate reduction with every preparation. They offer a precise way to achieve proper occlusal reduction, with a self-limiting angled collar that limits the bur to the designated depth. The eight degree taper allows for perfect preparation of the walls for inlays and onlays. Using the **Tapered Occlusal Reduction Diamonds** has definitely been a game changer.

ProTemp Crown

3M



www.3M.com/dental
Clinician: Dr. Sabiha S. Bunek

CLINICAL PROBLEM:

The process of fabricating a provisional restoration utilizing a preliminary impression or matrix requires multiple steps and is time consuming.

SOLUTION:

ProTemp Crown Temporization Material pre-formed crowns have completely changed our temporization workflow, saving us time and headaches. Assistants no longer spend time taking preliminary impressions or fabricating a matrix. Instead, a tooth-colored preformed anatomically shaped temporary is fabricated directly after the final impression. **ProTemp Crown** comes in one shade and is available in a variety of sizes. Once the proper size is selected, the gingival contour is trimmed, and the crown is adapted, light cured and polished. The process takes us less than 5 minutes!



iBond Universal

Kulzer, LLC



www.kulzerUS.com

Clinician: Dr. Sabiha S. Bunek



Some universal bonding agents require a separate dual-cure activator.



CLINICAL PROBLEM: With all of the new universal bonding agents on the market, it's hard to keep track of which ones require a dual-cure activator and the circumstances in which they are needed.

SOLUTION: **iBOND Universal** is a universal bonding agent that is compatible with light-, self- and dual-cure materials. The dual-cure feature is built into the adhesive so there is no need for a separate bottle. It is reassuring to know I can obtain reliable bond strengths with all direct and indirect restorations!

Intraoral Syringe

3M



www.3M.com/dental

Clinician: Dr. Gary Bloomfield

CLINICAL PROBLEM:

Standard impression guns are big and bulky, making it difficult to simultaneously extrude and place wash material around the tooth preparation.



SOLUTION:

3M Intra-oral Syringes are designed to be lightweight and ergonomic for easier handling. The small size of the syringe allows for precise application of the wash material around the preparation and alleviates hand stress. The syringes are single-use and can be pre-loaded with the desired amount of material; ultimately reducing waste.



Microflex® Ultraform® Gloves

Ansell



www.microflex.com

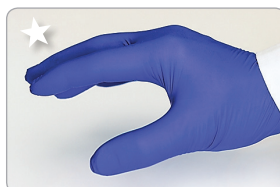
Clinician: Dr. John A. Molinari

CLINICAL PROBLEM:

No matter what brand I try, I can't find a pair of gloves that are a good fit for my hand size.



Size small: too tight



Size small/medium: **BEST FIT**



Size medium: too large

SOLUTION:

Microflex® Ultraform® has half sizes!! This is an award winning glove that was evaluated before it came in half sizes. Consultants noted its uniquely thin, light-weight nitrile material that provided great tactile sense with less hand fatigue. Now available in sizes XS, XS/S, S, S/M, M, M/L, L, and XL.

eCEMENT™

Bisco Dental Products, Inc.



www.bisco.com

Clinician: Dr. John W. Farah



CLINICAL PROBLEM:

With the growing number of restorative materials available on the market, the once simple cementation procedure has become more complicated. It is hard to keep up with what primer, bonding system and cement to use.

SOLUTION:

I love **eCEMENT™** because it has everything you need in one kit to cement lithium disilicate restorations. The grouping and labeling of the materials into one kit simplifies the process, eliminates guess work and time spent searching for products; **eCEMENT** results in more efficient cementation appointments.

Bib-Eze

Kerr Restoratives



www.kerrdental.com
Clinician: Shami Tamber, CDA



CLINICAL PROBLEM: Metal bib clips and chains are difficult to clean between patients, and often get misplaced.

SOLUTION: Multiple studies have found that traditional bib clips and chains can be a source of cross-contamination. **Bib-Eze** is a disposable bib clip and chain, all in one. Using the peel back adhesive tab, place it on the bib for a perfect position. They are simple to use, cost effective, and limit cross-contamination. They also eliminate the cost of cleaning both in time and materials.

Path-O-Guard™ Earloop Face Masks

Richmond Dental & Medical

www.richmonddental.net
Clinician: Dr. Sabiha S. Bunek



CLINICAL PROBLEM:

When wearing Level 3 face masks, there is an increased amount of fogging with my safety goggles. I also find it harder to breathe.



SOLUTION:

Richmond's Path-O-Guard™ Earloop Face

Masks have a nose clip that is designed to improve adaptation and fit across the bridge of the nose. Most level 3 masks are very thick and any heavier breathing causes more fogging of eyewear. These masks are not confining making it easier to breathe as well as protect from fluid. The nosepiece fits perfectly under my loupes and I did not experience fogging.

Antivet

MDC Dental



www.antivet.com
Clinician: Dr. Lawrence Katkow



Before treatment



After treatment

CLINICAL PROBLEM: Patients desire conservative treatment options to help mask fluorosis stains.

SOLUTION: **Antivet** is a cost-effective dental stain remover especially formulated for removal of pigmentation (brownish stains) on the enamel surface caused by dental fluorosis and any extrinsic stain. After a rubber dam is applied, the solution is scrubbed on the stain, and an acid neutralizer placed when complete. The acidic solution allows for fluoride ions absorbed into stain (apatite crystals) to separate forming soluble salts which are easily removed.

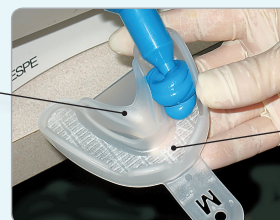
Directed Flow Impression Tray

3M

www.3M.com/dental
Clinician: Dr. Gary Bloomfield



Built-in reservoir helps reduce gagging for better patient comfort



Self-retentive fleece-strip eliminates need for adhesive

CLINICAL PROBLEM: Stock trays generally do not fit well, are uncomfortable for the patient, and often need a separate adhesive in order for impression material to stay in place.

SOLUTION:

3M Directed Flow Impression Trays are the best and most comfortable stock trays in dentistry. They are lined with a self-retentive fleece strip and require no adhesive; the fleece strip also is a barrier to help avoid tooth/tray contact. The design also includes a built in reservoir to help with gagging issues and a surrounding retention lip to reduce material overflow. When looking for impression accuracy, **3M Directed Flow Impression Trays** are the ones to use. They will eliminate the need for a second impression.

Ultralight Optics Cordless

Ultralight Optics



www.ultralightoptics.com
Clinician: Dr. Julius E. Bunek

CLINICAL PROBLEM:

Cords from loupe lights interfere with a dental professional's clinical operations.

SOLUTION:

Ultralight Optics Cordless

eliminates the need for a long cord connecting your loupes to the battery in your pocket. Further, it's LED light is the lightest weight on the market and it has an eight-hour battery life.



Anutra Anesthetic Delivery System

Anutra Medical



www.anutramedical.com
Clinician: Dr. Julius E. Bunek

CLINICAL PROBLEM:

I appreciate the profound anesthesia achieved by an IAN block. However, you lose valuable time waiting for the anesthetic to take effect.

SOLUTION:

Anutra's unique buffering system allows operators to buffer only the anesthetic they need for each procedure. Often we have to wait 5-10 minutes after an injection to begin treatment. This is a system for buffering the anesthetic immediately prior to use. The sodium bicarbonate buffer is biocompatible and brings the anesthetic to a neutral pH, making the injection more comfortable for the patient, with a quicker onset and often requiring less volume for the desired effect. Patient response has been great! We will continue to make this system a routine part of our everyday armamentarium.



Seal-Tight™

Kerr TotalCare



www.kerrdental.com
Clinician: Shelby Crawford



CLINICAL PROBLEM:

During the process of air-drying the bonding agent, sometimes small amounts of water get released potentially compromising the bond.

SOLUTION:

Seal-Tight air/water syringe tips actually have a soft, flexible material within the hard outer shell that acts like a new o-ring with each placement of a new disposable tip. Typical air/water syringe tips rely on an actual o-ring to keep air and water separate. These o-rings wear over time, and air and water will often mix as a result. **Seal-Tight** tips do not depend on the o-ring in the equipment for a seal. My air and water stay separate, I have no leaking at the connection, and I no longer have to change o-rings on a regular basis!

UNO™ Topical Gel

Germiphene



www.germiphene.com
Clinician: Dr. Fiona M. Collins



CLINICAL PROBLEM:

Following a dental appointment, patients may avoid brushing certain areas of their mouth due to sensitivity.

SOLUTION:

UNO gel relieves sensitivity, and can be given to patients to use at home. They should be instructed to apply the gel to the sensitive area with a clean finger, twice daily, and to avoid eating/drinking or rinsing for at least 10 minutes. If preferred, patients can apply it with a Q-Tip. **UNO** gel contains Bioschell with bioactive polymers, and xylitol.



OPTIM® 1

SciCan



www.scicanusa.com

Clinician: Dr. John A. Molinari



CLINICAL PROBLEM: Dental offices need a disinfectant with a quick contact time that doesn't harm surfaces or their health. A short yet effective tuberculocidal contact time that accomplishes cleaning is also desirable.

SOLUTION: Water-based agents can effectively clean surfaces prior to disinfection. **OPTIM 1**, an accelerated hydrogen peroxide disinfectant, has been proven to be an excellent cleaner for removal of bioburden, and has a fast 1 minute contact time for tuberculocidal activity. In addition, **OPTIM 1** is in the EPA's lowest toxicity category and has been tested to be compatible with the market's most popular dental equipment.

Cleaning Monitors

Hu-Friedy



www.hu-friedy.com

Clinician: Carol Reed, CDA



CLINICAL PROBLEM:

We use the aluminum foil test to check efficacy of our ultrasonic cleaner. Unfortunately small foil fragments get left in the tank, requiring additional cleaning or retrieval prior to retesting.

SOLUTION:

A more efficient solution to test the function of your ultrasonic cleaner is to use **Hu-Friedy's Cleaning Monitors**. These assure that the ultrasonic unit is functioning at the highest level of effectiveness. **Cleaning Monitors** assess cavitation, time, temperature, and detergent load of each cycle quickly and effectively. Our Microbiology lab found that use of the **Hu-Friedy Ultrasonic Cleaning Monitors** and **Washer-Disinfector Cleaning Monitors** appeared to provide an effective method for assessing the effectiveness of ultrasonic and instrument washer cleaning processes.

SecureTip

SecureTip



www.securetip.com

Clinician: Emily Shaw, B.S., RDH



CLINICAL PROBLEM:

Saliva ejector valves wear over time and cause saliva ejectors to fall out during use.

SOLUTION:

Secure Tip has an innovative screw design and autoclavable, reusable valve unique to the system. Our hygienists switched all valves to **Secure Tip**. They love not having to worry about the saliva ejector becoming loose during procedures. Due to the stability of the saliva ejector, **Secure Tip** makes it easy to work alone and keep things really dry.

Photo Mirror Kit Professional

Jakobi Dental Instruments



www.jakobi-dental.com

Clinician: Nicole Yaeger, RDA



CLINICAL PROBLEM:

Taking clinical photos is a critical, but time consuming part of practicing dentistry. It often takes two sets of hands to achieve the desired results.

SOLUTION:

The Jakobi Mirror Kit includes a handle with an integrated battery operated defogger which frees the photographer from the chore of blowing air on the mirror with the air water syringe. The kit also includes a retractor, for occlusal shots, and a long handle allowing the patient to hold the retractor, again freeing the hands of the photographer. Our assistants team loves this product!

Glidewell Dental Laboratories
www.glidewelldental.com

99%
rating at
recall



BruxZir Anterior, teeth #5-12 and 20-29.

Introduction:

BruxZir Anterior is a highly esthetic zirconia designed for anterior and posterior indirect restorations. **BruxZir Anterior** has a flexural strength of 650 MPa with translucency and color similar to natural dentition. In comparison to monolithic glass ceramic restorations, **BruxZir Anterior** requires less tooth reduction due to its superior flexural strength and it is gentle on the opposing natural dentition. Only 0.8 mm of reduction is required in most cases, although 1.25 mm is ideal, allowing for conservative tooth preparation. Indications include single-unit crowns, three-unit bridges with one pontic and implant crowns.

Clinical Evaluation Protocol:

Results at Two-year Recall

At two years, 278 restorations were available, including anterior and posterior single crowns, implant crowns and three-unit bridges (Figures 1 and 2). Of the posterior crowns, 95% were 1st and 2nd bicusps, and 5% were 1st or 2nd molars. All restorations were fabricated by Glidewell Laboratories.

Consultant Comments after Placement

- "The crown is beautiful."
- "The patient's crowns look really natural."
- "I have done several 6-8 units of BruxZir Anterior crowns and they all look awesome – the patients are very happy."

Figure 1. Types of **BruxZir Anterior** restorations

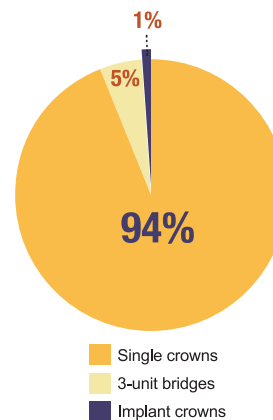
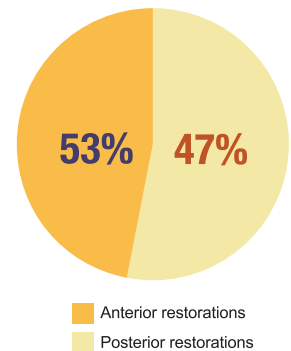


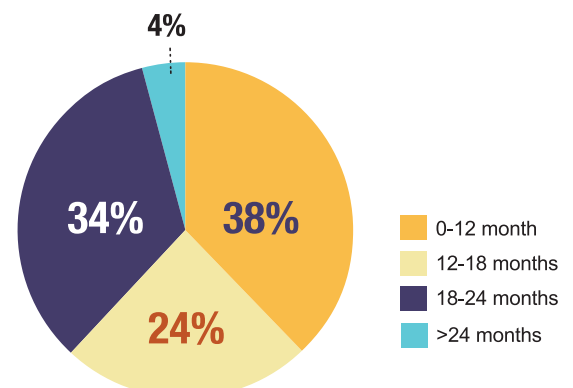
Figure 2. Distribution of **BruxZir Anterior** restorations



Clinical Results

Restorations were evaluated in the following areas: esthetics, resistance to fracture/chipping, resistance to marginal discoloration, and wear resistance on a 1-5 scale: 1=poor, 2=fair, 3=good, 4 = very good, 5=excellent. Of the 278 restorations, 38% had been in function for up to 12 months, 24% for up to 18 months, 34% for up to 24 months, and the remaining 4% for more than 24 months (Figure 3). Ninety-five percent of restorations rated received a rating of 5 or excellent for esthetics (Figure 4). Of the remaining 14 restorations (5%), the majority (11 restorations) received a rating of 4 while the remaining three restorations received a rating of 3. One bicuspid restoration experienced a lingual cusp fracture and another exhibited a mesiodistal cuspal crack. A third bicuspid exhibited excessive microleakage and the restoration was replaced. The microleakage is a function of the cement and not the ceramic. At least 99% of restorations received a rating of 5 or excellent for resistance to fracture/chipping, resistance to marginal discoloration and wear resistance.

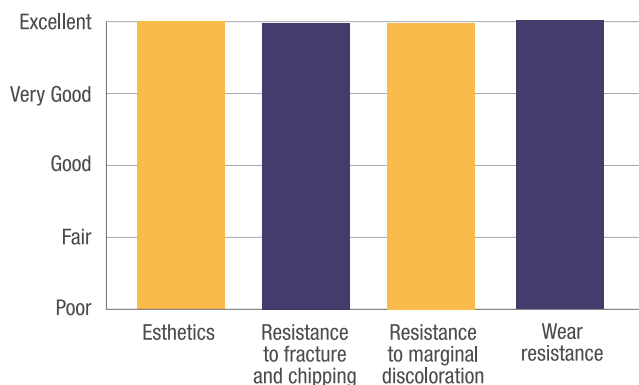
Figure 3. Age of **BruxZir Anterior** restorations at recall



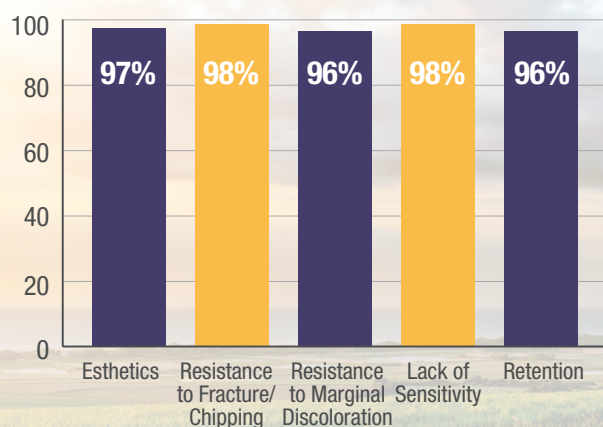
BruxZir® Anterior (2-YEAR RECALL) *continued*

Summary

At two years, more than 300 **BruxZir Anterior** restorations had been placed and 278 were available for recall. **BruxZir Anterior** received excellent ratings in the areas of esthetics, resistance to fracture/chipping, resistance to marginal discoloration, and wear resistance. **BruxZir Anterior** is recommended for use in anterior restorations and selected posterior restoration. Its flexural strength surpasses most silica-based ceramic materials available to the dental profession. **At two-year recall, BruxZir Anterior received a clinical performance rating of 99%.**

Fig. 4: Ratings of **BruxZir Anterior** restorations at two-year recall.

THE DENTAL
ADVISOR
dentaladvisor.com



THE LONG ROAD

The Long-term Clinical Database:

- Clinical database tracking over 40,000 restorations in the past 33+ years
- Over 70 long-term reports published

Categories tracked:

Placement:

- Esthetics
- Marginal Integrity
- Fit to the Tooth

Recall:

- Esthetics
- Fracture/Chipping
- Microleakage
- Wear
- Retention

DID YOU KNOW?

Many products reported on in THE DENTAL ADVISOR have free samples available for our readers. To sample products, go to the article and look for this icon, or go to **www.dentaladvisor.com/clinical-evaluations** and view a list of samples available.



Order Samples

THE DENTAL
ADVISOR

Tetric EvoCeram® Bulk Fill

(4-YEAR CLINICAL PERFORMANCE)



Ivoclar Vivadent, Inc.
www.ivoclarvivadent.com

98%
rating at
recall

Description:

Tetric EvoCeram® Bulk Fill is a nano-hybrid composite indicated for direct restorations in posterior teeth. This radiopaque composite contains patented pre-polymers that reduce shrinkage stress; *Ivocerin*, a photo-initiator that results in a deeper depth of cure; and light sensitivity filters for extended working time. The composite is filled 53-54% by volume with particles in the 40-3,000 nm range.

Tetric EvoCeram Bulk Fill cures in 10 seconds (1000 mW/cm²) in increments up to 4 mm in depth.



Clinical Evaluation Protocol:

Over a four-year period, 117 of 130 **Tetric EvoCeram Bulk Fill** restorations were recalled. Figure 1 indicates the distribution of restorations with the majority of placements in the posterior region. Figure 2 indicates the age of the restorations at recall.

Fig. 1: Distribution of recalled **Tetric EvoCeram Bulk Fill** restorations.

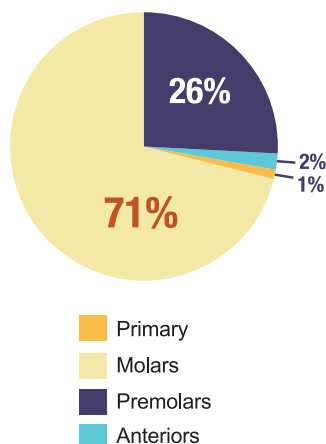
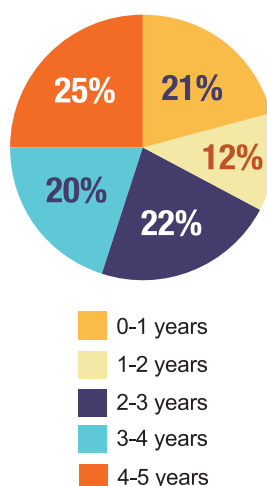


Fig. 2: Age of **Tetric EvoCeram Bulk Fill** restorations at 4-year recall.



Consultants' Comments

- "The esthetics were excellent – retains surface gloss over time."
- "Easy to place, not sticky and contours well."
- "Blends very well with the tooth, especially when tooth is not discolored."

Clinical Observations:

The recalled restorations were evaluated in the following areas: esthetics, resistance to fracture/chipping, resistance to marginal discoloration, and wear resistance. Restorations were evaluated on a scale of 1-5 with 1=poor, 2=fair, 3=good, 4=very good, and 5=excellent.

Esthetics

Tetric EvoCeram Bulk Fill is available in three universal shades (Universal A – IVA, Universal B – IVB, and Universal White – IVW). Eighty-three percent of recalled **Tetric EvoCeram Bulk Fill** restorations received an excellent rating (Figure 3). Seventeen percent received a very good to good rating. In cases where the tooth was discolored, consultants used flowable composite opaquer for improved esthetics.

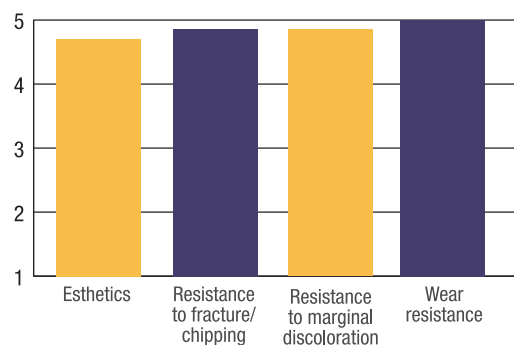
Resistance to Fracture/Chipping

Of the restorations recalled at 4 years, 111 restorations (95%) received an excellent rating (Figure 3) for resistance to fracture/chipping. 3.5% of the restorations received very good to good ratings and required no action. Only two restorations needed to be replaced. Both were tooth failures – one required a crown and one required extraction due to root fracture.

Resistance to Marginal Discoloration

Tetric EvoCeram Bulk Fill offers low shrinkage and low shrinkage stress for superior adaptation to the margins. Resistance to marginal discoloration was also rated excellent (Figure 3). Eighty-eight percent of restorations (103 of 117) received an excellent rating, while 12% of the remaining restorations received a very good to good rating. Four restorations that had previously exhibited superficial staining at the cavosurface margin at the two-year recall had been re-polished with excellent results.

Fig. 3: Ratings of Tetric EvoCeram Bulk Fill restorations at four years.



Restorations were evaluated on a scale of 1-5 with 1=poor, 2=fair, 3=good, 4=very good, and 5=excellent.

Wear Resistance

Wear resistance was rated excellent (Figure 3). None of the recalled restorations exhibited any wear of the composite or the opposing dentition (Figure 3). **Tetric EvoCeram Bulk Fill's** nano-filler technology provides improved strength, high gloss, and low wear properties.

Conclusions

Tetric EvoCeram Bulk Fill performed exceptionally well at four years. The clinical outcomes of this four-year evaluation of 117 restorations were excellent. **Tetric EvoCeram Bulk Fill** received a clinical rating of excellence with a 98% overall clinical performance rating at 4 years.

Activa BioActive Restorative™

(2-YEAR CLINICAL PERFORMANCE)

Pulpdent

www.pulpdent.com

98%
rating at
recall

Description:

Bioactive restorative materials are relatively new in dentistry. They are restoratives that are moisture friendly, transport water, and stimulate apatite formation at the material-tooth interface. In addition, these resins react to pH changes in the mouth by releasing and up-taking calcium, phosphate and fluoride ions, thus helping to maintain the chemical integrity of tooth structure. The first generation of this class of composites can be placed with or without a bonding agent and is delivered via a dual-barrel, automix syringe.

Clinical Protocol:

A total of 194 anterior and posterior **ACTIVA BioActive-Restorative™** restorations were originally placed and 158 of these restorations were recalled at two years. The restorations were placed with and without the use of bonding agent after etching (Figure 1). They were one, two, three or four surface restorations (Figure 2).

Consultants' Comments

- "I have used **ACTIVA BioActive-Restorative** as a core in teeth with deep decay - the uptake of Ca, P and F could have a positive effect in these cases."
- "I like using **ACTIVA BioActive-Restorative** in pediatric patients - it bonded well without a bonding agent."
- "The esthetics were excellent at 2 years."

Fig. 1: Distribution of restorations placed with and without bonding agent.

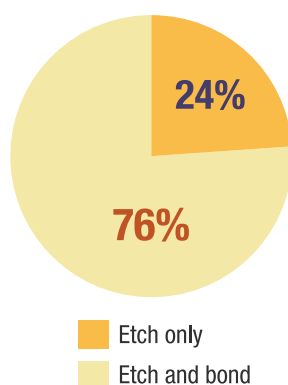
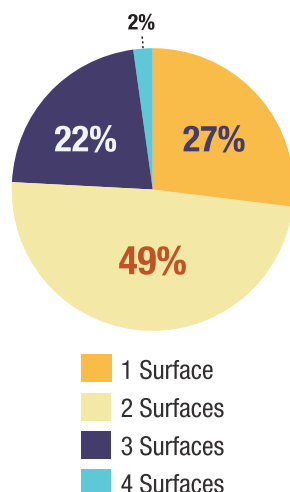


Fig. 2: Distribution of surfaces of restorations.



Results at Two Years:

Lack of Postoperative Sensitivity

After initial placement, only a few patients reported some sensitivity, which subsided over time. At the two-year recall, no patients reported any postoperative sensitivity (Figure 3).

Esthetics

The esthetics of the restorations were excellent (Figure 3). Ninety six percent of the recalled 158 restorations received a rating of 5, while 3 received a rating of 4, and 3 a rating of 3 – lower ratings usually were the result of slight staining and discoloration. None of these restorations needed replacement.

Resistance to Marginal Discoloration

Resistance to marginal discoloration was also excellent (Figure 3). Only 4 out of the 158 restorations received a rating of less than five. Two had a rating of 4 and two others had a rating of 3.

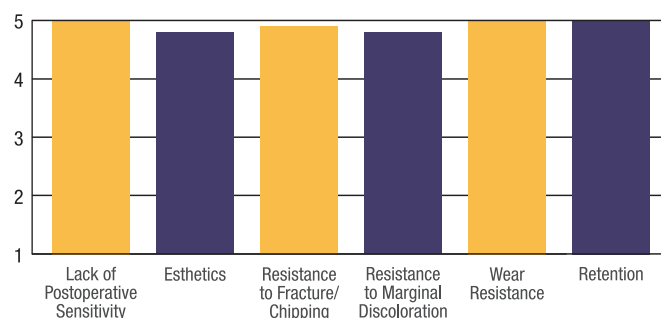
Wear Resistance

Ninety-nine percent of the restorations exhibited no signs of wear (Figure 3). Only two of the recalled restorations exhibited slight wear.

Retention

Retention was excellent (Figure 3). One restoration out of the 158 partially debonded and was replaced.

Fig 3. Ratings of **ACTIVA BioActive-Restorative** at two-year recall.



Summary

ACTIVA BioActive-Restorative performed extremely well at the two-year recall. Each evaluated category received a 96% or better rating. Overall **ACTIVA BioActive-Restorative** received a clinical performance rating of 98% at the two-year recall.

Cavex Cream Alginate

+++++

Cavex

www.cavex.nl



97%
overall
rating

Description

Cavex Cream Alginate is a dust-free, alginate impression material designed to be easily mixed to a smooth, creamy consistency. It offers a high tear strength, elasticity, snap set, and detail accuracy to 5 microns. In addition, this impression material has a pleasant odor and color. **Cavex Cream Alginate** is available in normal and fast setting options. The fast-setting version has a 20-second mixing time, and a total working time of 2 minutes 20 seconds, which includes a 1-minute intraoral setting time. The normal-setting version has a 30-second mixing time, and a total working time of 3.5 minutes, which includes 1.5 minutes for intraoral setting. The impression can be scanned for digitizing. **Cavex Cream Alginate** is packaged in 500 g bags. Powder scoop and water measure are available.

Indication

- All procedures where an alginate impression is required.

Consultants' Comments

- "Great product. The detail and accuracy is excellent."
- "Easy mixing for a creamy consistency. I never had any bubbles or voids in my impressions."
- "I love the working time, it sets so fast. It makes it so much better for the patient."
- "Good tear resistance."
- "I liked the contrast color."
- "Nice feel, nice taste, smells good. Patients never complained about the taste and kids loved it."
- "We would switch to this product because it has great detail and is very user friendly."
- "There were air bubbles in the material."
- "It set up too fast at times, even when mixing and working quickly."
- "Different packaging would be preferable - a container that the bag goes in, a sturdy tub/canister, unit doses for ease of use, or a resealable bag to effectively close the bag once opened."

Clinical Tips

- Follow the instructions and have the patient rinse first - it makes it easier to remove the impression.
- Use very cold water and spatulate well. Make sure the amount of water matches the measure to ensure the correct consistency.
- Apply air lightly around the teeth- leave slightly moist to help prevent bubbles at the margin.
- The stiffness of the material helps with impressions for dentures.



Evaluation Highlights

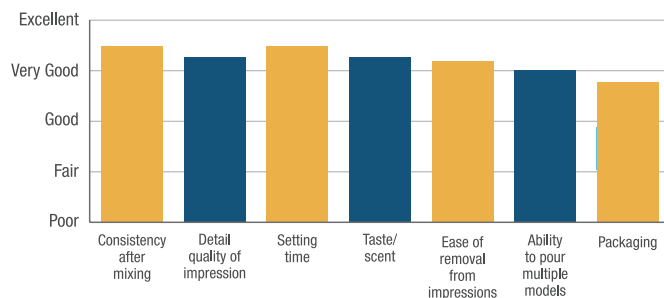
Cavex Cream Alginate (fast-setting) was evaluated by 29 consultants for a total of 432 times.

- Easy to use.
- Fast-setting.
- Tear-resistant.
- Good consistency.
- Smells and tastes pleasant.
- Accurate, detailed impressions.

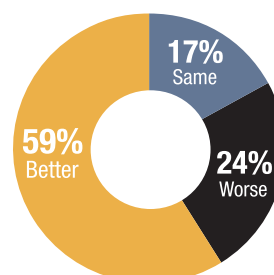
Unique Feature

- Accurate detail to 5 microns.

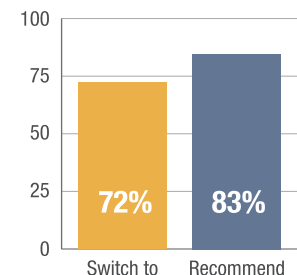
Key Features:



Compared to Competitive Products:



Percentage of Consultants Who Would:



Provicol QM Plus™



96%
overall
rating

VOCO

www.vocoamerica.com

Description

Provicol QM Plus is a non-eugenol, radiopaque temporary cement formulated to provide good marginal seal. It contains calcium hydroxide, which promotes the formation of tertiary dentin and is known to be bacteriostatic, and zinc oxide, which offers antibacterial activity. **Provicol QM Plus** has a working time of 1 minute at room temperature. The initial gel set occurs in 1 minute intra-orally, stabilizing the temporary and enabling easy clean-up of excess cement. The final set takes 4 minutes. **Provicol QM Plus** is available as an automix version for quick mixing, as well as in tubes. The automix version is delivered in 5 mL syringes together with mixing tips.

Indications

- Cementation of temporary crowns and bridges.
- Temporary cementation of permanent restorations.

Consultants' Comments

- "I liked the ease of use with the automix, and dispensing with the syringe."
- "Great consistency. Flows well and stays where placed. Temporaries stayed in place."
- "Most of the cement stays in the temporary after removing it, making clean-up easy."
- "This cement was easy to clean up, both during seating and removal of temporaries."
- "Retention was good, none of the temporaries came off. Lack of sensitivity too."
- "I like the calcium hydroxide in it."
- "Great for multiple units."
- "Excellent - it is my new 'go to' temp cement for multiple units."
- "I would like greater viscosity and a fast-set formulation."

Clinical Tips

- Clean up after the initial set - it's hard to remove excess after 4 minutes.
- Bleed the container prior to attaching mixing tip.
- It may take more than 4 minutes before it is fully set.
- Practice with the material when you start using it to find the optimal time for clean-up of excess cement.



Unique Feature

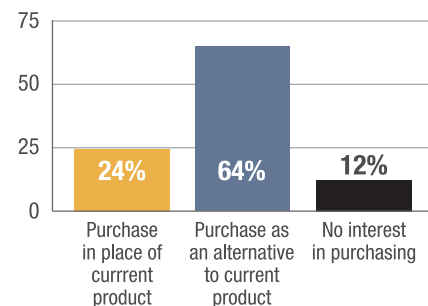
- Two-stage curing allows for easy removal of excess cement immediately following the initial gel set.

Evaluation Highlights

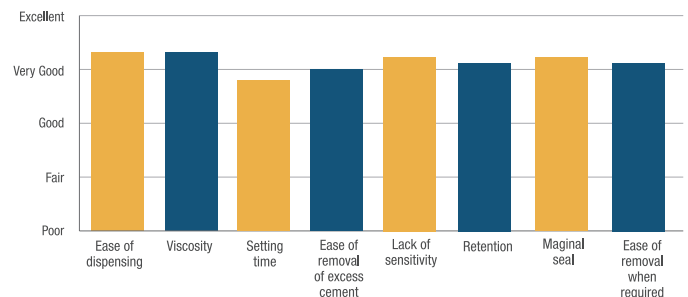
Provicol QM Plus was evaluated by 33 consultants for a total of 525 times.

- Easy to dispense.
- Flows well.
- Easy to use.
- Easy clean-up.

Percentage of Consultants Who Would:



Key Features:





96%
overall
rating

VOCO

www.vocoamerica.com

Description

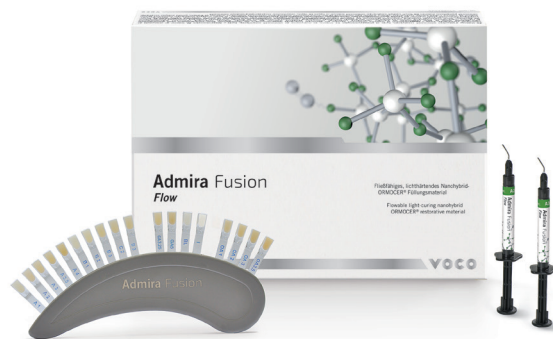
Admira Fusion Flow is an all-ceramic-based radiopaque, flowable nanohybrid restorative containing ORMOCER technology. Silicon oxide forms the chemistry for the fillers as well as the resin matrix. This restorative material offers up to 50% less shrinkage than conventional flowable composites, a high surface hardness, wettability, and "flow on demand" properties. It has a filler content of 74% by weight, flexural strength of 115 MPa, and a compressive strength of 281 MPa. The material is radiopaque at 240% Al. Its depth of cure is generally 2.7 mm, while the Universal shade has a 4 mm depth of cure. **Admira Fusion Flow** can be used as a one-shade or multiple-shade system and offers three levels of translucency. It is available in shades: A1, A2, A3, A3.5, A4, B1, B2, C2, and opaque A2, white opaque (WO) as well as Incisal (I), OA2 Bleach (BL). Cure time is 20 seconds for all except opaque shades and A4, which have a cure time of 40 seconds. **Admira Fusion Flow** is delivered in 2 g syringes, together with syringe tips.

Consultants' Comments

- "Very nice viscosity, non-sticky and easy handling."
- "It flowed well and adaptation was great. Handled better than any other flowable I have used."
- "Great shade match."
- "All-ceramic properties are great. I like that it does not contain classic monomers."
- "No bubbles, it was easy to blend."
- "Like its big brother Admira Fusion, it has a wonderful chameleon effect."
- "Stays put and doesn't overlap class V margins. Really cuts down finishing time!"
- "I like that the cure time is indicated on the syringe."
- "This material is a real workhorse."
- "Minimal polishing time. The final finish was superb."
- "It slumped in Class V and root areas."
- "A few times it stuck to composite instruments."

Clinical Tips

- Use the material's flow characteristics during placement rather than manipulating it with instrument.
- I still use a periodontal probe to wet the flowable into the cavo-surface edges.
- Use the small tip for greater control of flow.
- You can 'pile' or 'stack' this flowable more than others, just be aware of the higher viscosity.
- Keep the tip submerged to prevent bubbles.
- Great opaquer and great for porcelain repairs.



Indications

- As a liner or coating for preparations
- Class III to V restorations, and small restorations
- Repairing fillings, veneers and temporary restorations
- Extended fissure sealing
- Blocking out undercuts
- Luting translucent prosthetic pieces (including veneers)
- Locking, splinting of loose teeth.

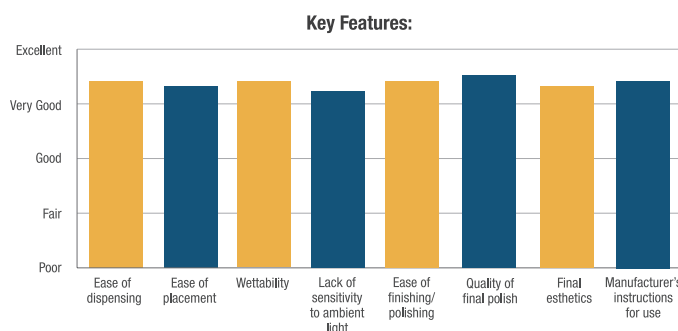
Unique Features

- Free of classic monomers such as BisGMA, TEGDMA or HEMA, eliminating potential post-polymerization release of these substances.
- Thixotropic, allowing for "flow on demand" without slumping.
- Multiple shade system with three levels of translucency.

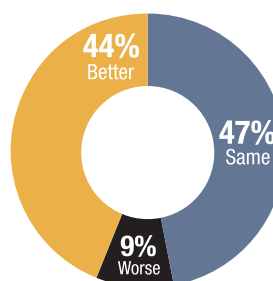
Evaluation Highlights

Admira Fusion Flow was evaluated by 32 consultants for a total of 757 times.

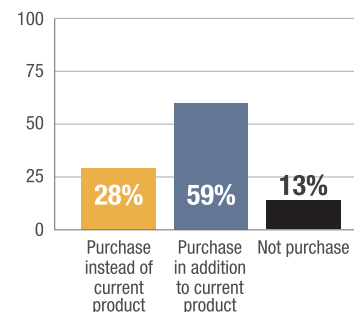
- Easy to use.
- Easy to dispense.
- Flows well with good adaptation.
- Excellent polish.
- Good shade match.



Compared to Competitive Products:



Percentage of Consultants Who Would:



CLEARFIL™ Universal Bond Quick

+++++



98%
overall
rating

Kuraray Noritake Dental, Inc.

www.kuraray.com

Description

CLEARFIL™ Universal Bond Quick is a fluoride-releasing, universal adhesive with MDP monomer and amide monomer chemistry that provides rapid bond technology. The amide monomer rapidly permeates dentin and enamel, eliminating wait time after application. There is no need for long rubbing application of the adhesive into the dentin. In addition, it is more hydrophilic than HEMA and absorbs less fluid. The MDP monomer creates a strong chemical bond to hydroxyapatite for excellent adhesion. When mixed with **CLEARFIL DC Activator**, which is available in 4 mL bottles, this bonding agent becomes dual-cure and has universal use with both self- and dual-cured resin cements and core build-up resins. **CLEARFIL Universal Bond Quick** is available in 5 mL bottles, packs of 3 bottles and as a standard kit containing 1 bottle of bonding agent, a 3 mL syringe of K-ETCHANT Syringe, 20 needle tips, a dispensing dish, 50 fine applicator brushes, and a light-blocking plate. **CLEARFIL Universal Bond Quick** is also available in unit doses, either 50 or 100 to a pack, together with a 3 mL syringe of K-ETCHANT Syringe, 20 needle tips and 50 or 100 fine applicator brushes, respectively.



Unique Features

- Contains silane (bonds to lithium disilicate and porcelain). May be used as a self-cured adhesive with **CLEARFIL DC Activator**.

Evaluation Highlights

CLEARFIL Universal Bond Quick was evaluated by 31 consultants for a total of 1,065 times.

- Easy to dispense and place.
- Bottle and unit dose options.
- Good viscosity - thinly coats the surface where applied.
- Quick, simple and versatile.
- Suitable for all bonding procedures.

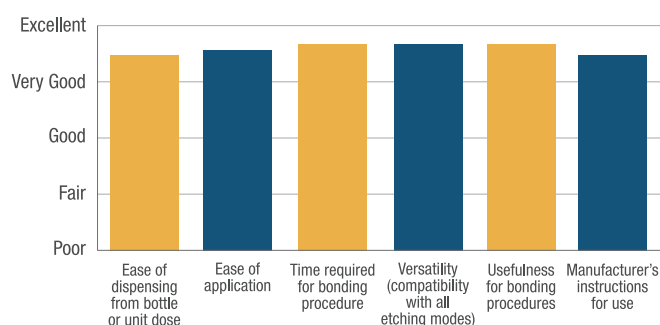
Consultants' Comments

- "Perfect viscosity. Ease of use and speed were great."
- "I love the unit dose - so easy to use, and there was plenty of adhesive for most procedures in each one."
- "Great for replacement of silane to prime crowns for cementation with resin cements - will self-cure with the dual-cured resin."
- "Loved the fact that it is compatible with dual/self-cured resins and also love that it can be used in self-cured mode with CLEARFIL DC Activator. It's applicable for all bonding procedures."
- "Great product. A 'go to' bonding agent."
- "The access hole in the unit dose was a little small."
- "I'd switch if it did not require refrigeration. Would prefer if it were a little less thick."
- "The quick rub and cure were really helpful when the area was difficult to isolate."

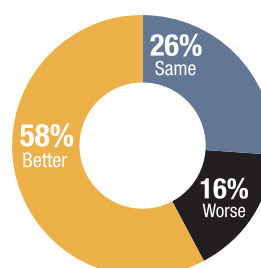
Clinical Tips

- Use the unit dose if doing quadrants or more than one tooth; use bottle if doing only one tooth.
- A gentle air stream before blowing excess away seemed to help spread it into any areas that may have been missed by the applicator brush.
- Carefully twist and then snap-off the top of the unit dose.
- Remember that you don't have to rub this bonding agent in place for 20 seconds.

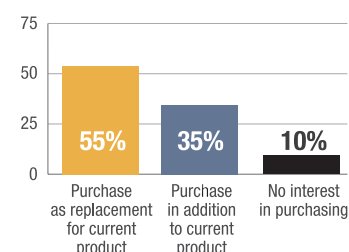
Key Features:



Compared to Competitive Products:



Percentage of Consultants Who Would:





96%
overall
rating

Zendo®

www.zendo-online.com

Description

Select® Diamond Burs are single-use, friction-grip burs designed to cut with maximum precision and minimum vibration. They are Swiss-manufactured to strict tolerances using Safeshank® heat-treated hardened stainless steel, resulting in precise shank diameters for vibration-free cutting. In addition, the Triton® coating process used is reported to double the strength of the diamond bonding to the shank for long lasting, sharp and smooth cutting ability. **Select Diamond Burs** are packed in a Class 10 Clean Room then gamma irradiated. They are available in coarse, extra coarse, medium, fine and extra-fine grits. Available shapes include round, pear, pointed cone, BUD, EGG, flat end taper, flat end cylinder, flame, barrel, round end taper, wheel ended rim, KS cylinder, gross reduction cylinder and interdental burs. **Select Diamond Burs** are packaged as individual burs, available in blister packs containing 10 burs.

Indication

Procedures requiring the use of diamond burs.

Consultants' Comments

- "They fit well in the handpiece, cut smoothly and there was no vibration."
- "Their cutting efficiency is outstanding."
- "Cut well and its nice they are single-use disposable."
- "I was able to accomplish everything I wanted to with these single-use diamonds."
- "Good durability and concentricity."
- "Great quality for a single-use diamond."
- "High quality. They did not clog up with debris."
- "Good range of shapes, I liked the long flame bur and the availability of long shanks."
- "The shank was shorter than I am used to."



Unique Features

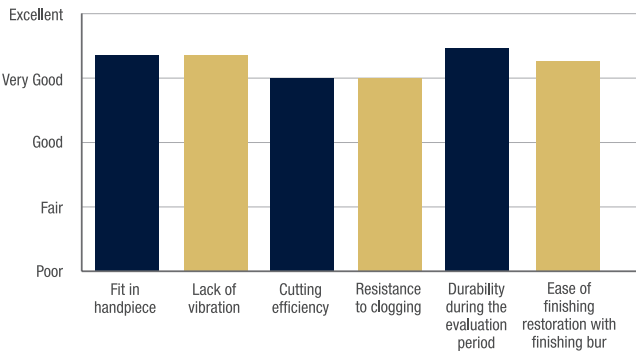
- 5-year shelf life.
- Pre-sterilized single use.

Evaluation Highlights

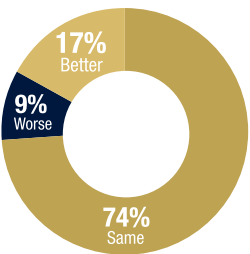
Select Diamond Burs were evaluated by 23 consultants for a total of 587 times.

- Efficient cutting.
- Cuts smoothly.
- Fits well in handpiece.
- Good concentricity/lack of vibration.
- Durable.

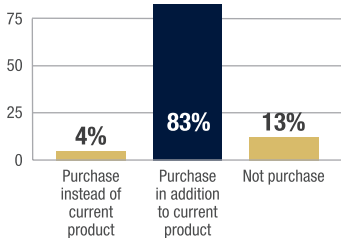
Key Features:



Compared to Competitive Products:



Percentage of Consultants Who Would:



Sanctuary™ Powder Free Black Latex Dental Dam

++++ ½

Sanctuary Dental
www.sanctuary-dental.com

93%
overall
rating

Description

Sanctuary™ Powder Free Black Latex Dental Dam is powder-free, mint-scented and offers high tear resistance. It is fabricated using a proprietary cleaning technique that removes most of the proteins attributed to latex allergies. The dental dam is opaque and black. **Sanctuary Powder Free Black Latex Dental Dam** is available in Medium gauge. The dam is packaged in pre-cut 6"x6" sheets (36/box).

Indications

- Oral procedures requiring use of a rubber dam.
- Only suitable for patients with no known allergy to latex.

Unique Feature

The black color of the dental dam provides for good contrast in dental photography.



Evaluation Highlights

Sanctuary Powder Free Black Latex Dental Dam was evaluated by 24 consultants for a total of 267 times.

- Easy to use.
- Tear-resistant.
- Good fit.
- Good color for contrast.
- A variety of thicknesses

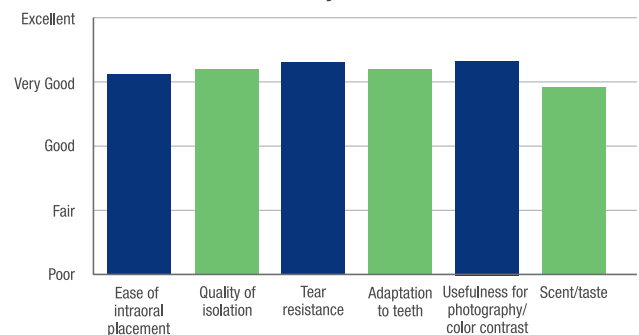
Consultants' Comments

- "Excellent fit."
- "Great tear resistance."
- "Easy on the eyes, and great for photography."
- "Best rubber dam ever."
- "Firmness was great for cheek retraction."
- "Great color contrast. It made it easier to see into the root canals."

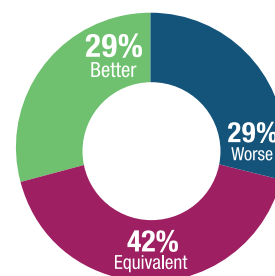
Clinical Tips

- Use the satin color side outwards.
- Use for posterior quadrant dentistry.
- Use the same cotton tipped applicator that was used to apply the topical anesthetic to lubricate the dental dam during placement. Once in place, the gel can be easily washed off with water spray.
- You only need to punch the dam once.

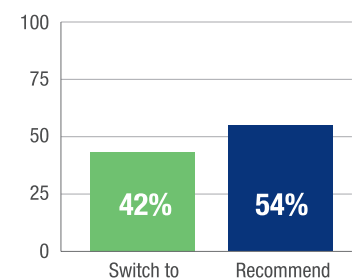
Key Features:



Compared to Competitive Products:



Percentage of Consultants Who Would:



Medicaline CA Files

+++ 1/2

Medicaline

www.medica-line.com

84%
overall
rating

Description

Medicaline CA Files are manufactured with austenitic nickel titanium for strength and flexibility. The files are designed for efficient cutting, to follow the original canal shapes, rotate continuously and have a variable taper. It is recommended that they be used at 300 rpm and with a torque of 2, 3 or 4 Ncm, depending on which file is being used. Available files and their taper are as follows: SX 019/4%; S1 018/2%; S2 020/4%; F1 020/7%; F2 025/8%; F3 030/9%; F4 040/6%; and F5 050/5%. **Medicaline CA Files** are available in 19, 21 and 25 mm lengths. Files are packaged in plastic boxes and in blister packages, 6 to a box/blister package. For an additional charge, sterilized blister packages are also available.

Indication

- Endodontic procedures requiring the use of rotary files.

Unique Feature

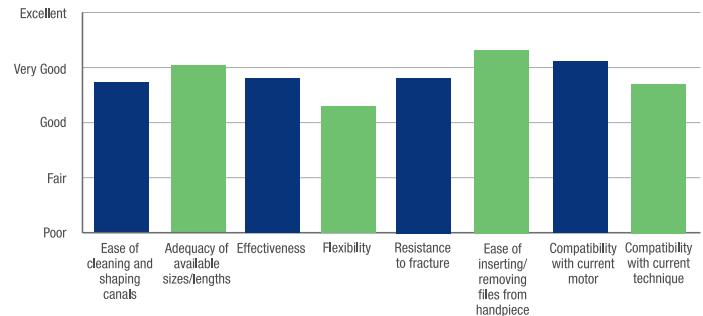
- Designed for instrumentation of calcified and curved canals.

Evaluation Highlights

Medicaline CA Files were evaluated by 23 consultants, in total of 244 times.

- Efficient cutting.
- Systemized approach.
- Good range of file sizes and lengths.
- Easy to insert and use with current endodontic handpiece system.

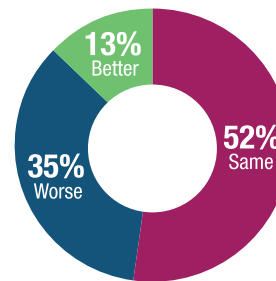
Key Features:



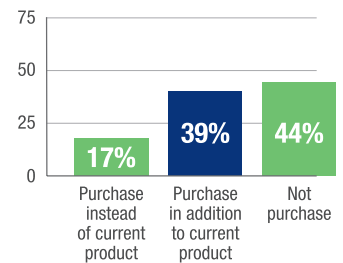
Consultants' Comments

- "Efficiently engages, cleans and shapes canals."
- "Good cutting efficiency."
- "The files cut very well and very quickly. Opened up the orifice very well for very clear visualization."
- "The files were great. The instructions were more difficult. Maybe a visual flow chart would help with which file to use when."
- "Great for curved calcified canals."
- "They provide a clear, systematic approach to cleaning and shaping canals. Makes molar endo much more streamlined."
- "I found the files to be significantly less flexible and efficient than the files I normally use. I had difficulty navigating some canals."
- "Cleaning/shaping did not seem to be consistent in the final 0.5-1 mm at the tip of the root."
- "There are too many files in this system."
- "Little different feel to my usual files, needed to be comfortable with them, but easy to get used to."

Compared to Competitive Products:



Percentage of Consultants Who Would:



SPECIAL THANKS TO:

Select Senior Clinical Consultants (Over 20 years):

J. Amara, CT · R. Fisher, OH · W. Gregory, MI · E. Katkow, MD · J. Lockwood, MI · J. Mayer, OH · W. Nagy, TX · G. Poy, MI · J. Shamraj, MI · R. Trushkowsky, NY · P. Yaman, MI

Senior Clinical Consultants (15-19 years):

K. Baker, TX · F. Berman, PA · J. Bostic, OH · L. Brimhall, MT · M. Briskin, NY · L. Brown, MI · W. Brownscombe, MI · R. Ciccone, MI · C. Colbert, MI · M. Conrad, PA · J. Dingman, WI · R. Dost, VA · J. Doueck, NY · M. Dwoskin, MI · M. Eannaccone, NY · R. Engle, IL · K. Fairbanks, MI · M. Feinberg, NY · K. Fischer, IN · G. Franco, NY · N. Garlisi, OH · K. Goodman, MI · S. Graber, IL · P. Grandsire, NY · E. Gutman, NY · D. Haas, Ontario · K. Hamlett, TX · S. Harlock, MI · G. Hart, OH · R. Herwig, KS · J. Kaminski, MI · R. Kaprielian, NJ · M. Kastner, OH · D. Keren, NY · M. LaMarche, WA · J. Leitner, MI · S. Lever, MD · R. Lezell, MI · M. Livernois, NC · M. Man, NY · B. Manne, FL · N. Mansour, MI · N. Markarian, CA · C. McLaren, MI · J.W. Mikesell, IL · R. Mizrahi, NY · G. Mosso, PA · E. Mosso, PA · J. Nash, MI · A. Nazarian, MI · E. Odenweller, OH · R. Oshrain, NY · J. Paris, TX · D. Parris, GA · M. Patel, MI · D. Peterson, MD · T. Pieper, WY · D. Pitak, MI · V. Plaisted, NY · D. Qualliotine, NC · G. Raichelson, Ontario · C. Reed, MI · G. Reskakis, NY · K. Schwartz, FL · J. Shea, MO · B. Shumaker, NJ · B. Sims, NY · P. Symeonides, NY · H. Tetalman, OH · C. Trubschenck, CA · S. Ura, NH · W. Walcott, MI · M. Waranowicz, MI · L. Wee, MI · D. Wojtowicz, MI · H. Yeung, CA · M. Zahn, MI · P. Zanetti, MI · S. Zimmer, MI

Clinical Consultants (14 years or less):

A. Albright, NY · N. Alexa, MI · G. Alfe, IL · B. Argersinger, NC · P. Arsenault, MA · G. Ash, MI · A. Bagchi, MI · B. Barricklow, OH · L. Bartoszewicz, MI · J. Bechtel, MI · C. Bhatti, MI · L. Bishop, MI · T. Bizga, OH · G. Bloomfield, MI · C. Brown, LA · E. Brust, MI · S. Bunek, MI · J. Bunek, MI · T. Burns, MI · J. Bush, PA · H. Cadorette, MI · S. Campbell, MI · P. Campo, NY · P. Cracchiolo, MI · D. Chacko, TN · P. Chaiken, IL · D. Chenevert, MI · R. Cherry, FL · M. Connelly, MI · W. K. Dancy, GA · C. Dietz, OH · S. Dillingham, NY · K. Dobracki, MI · J&E Duski, MI · A. Dutko, MI · M. Eiford, MI · O. Erdt, MI · M. Evers, OH · F. Facchini, MI · F. Falcao, FL · L. Feldman, NJ · M. Frankman, SD · M. Glovis, MI · C. Goldin, MI · M. Grant, MI · A. Green, MI · R. Green, MI · B. Greenwood, UT · J. Griffin Jr., MO · P. Gronet, KY · R. Grossman, PA · H. Gulati, MA · G. Haddad, CA · J. Haddad, MI · J. Hastings, CA · D. Hauck, CA · J. Hengehold, MI · B. Herrmann, CA · D. Hock, MI · C. Huang, CA · M. Huberty, WI · P. Indianer, MI · J. Ireland, MI · C. Jaghab, MI · J. Jaghab, MI · M. Kachi-George, MI · D. Kapp, NY · J. Karam, MI · E. Kelly, GA · J. Kelly, GA · L. Kemmet, MN · C. Knapp, MI · M. Koczarski, WA · B. Kolb, MI · D. Kuras, MI · C. Laird, OR · C. Latham, OH · R. Le, NC · I. Levine, NY · E. Lowe, BC, CAN · J. Lusby, MI · C. Manduzzi, MI · M. Mantzikos, NY · F. Margolis, IL · A. Marlow, MI · T. McDonald, GA · J. McLaren, MI · M. McMullin, MI · M. Migdal, MI · J. Minsky, CA · M. Moeller, MI · G. Molinari, MI · L. Montes, NY · M. Murphy, MI · L. Musgrave, MI · N. Nealis, IL · J. Neuman, MI · J. Olitsky, FL · J. Olsen, MI · F. Orlando, NY · S. Owens, MI · P. Panchal, NC · M. Paquette, MI · J. Parrott, MI · D. Perkins, MI · S. Picazio, NJ · C. Pike, MI · C. Piontkowski, MI · B. Pittsley, MI · T. Poirier, MI · D. Radtke, MI · G. Ramos, NY · C. Ramsey, FL · S. Reddy, MI · T. Reeves, TN · N. Rego, CA · J. Riggs, MI · J. Rowe, AR · J. Rubin, DC · D. Ruhlig, MI · A. Saddy, MI · P. Scalia, MI · C. Scanlon, MI · J. Schau, MI · L. Seluk, MI · R. Selvan, NJ · Y. Shaheen, MI · M. Shapiro, MI · A. Shemesh, IN · S. Simos, IL · B. Silver, MI · S. Simpson, MI · J. Smith, MI · C. Stevens, OK · B. Stevenson, MI · B. Stieper, MI · S. Tamber, MI · G. Tarantola, FL · T. Teel, IN · C. & L. Thorpe, MI · A. Valentine, MI · Lyn. Vandelaar, MI · H. Vann, MS · H. Whitt, MI · L. Williams, MI · K. Wilson, MI · D. Wolf, MA · W. Wright, CA · N. Yaeger, MI · S. Yun, MI · D. Young, MI · J. Zanetti, MI

Laboratory Consultants:

Apex Dental Milling, MI · Bullinger Dental Lab, MI · Centric Dental Laboratory, TX · Cornerstone Dental Studio, Inc., MI · David's Dental Laboratory, NY · Expertec Dental Lab, MI · Heritage Dental Laboratory, IL · Technique Crown and Bridge, Inc., NC