

DENTAL ADVISOR™

Product insights you can trust.

MAR-APR, 2022

Vol. 39, No. 02

A detailed, high-magnification microscopic image of various bacteria, primarily rod-shaped, against a dark blue background. The bacteria are rendered in shades of light blue and white, showing their textured surfaces and some internal structures. They are scattered across the frame, with some in sharp focus and others blurred in the background.

Infection Control: Latest Trends





As we pass our 2 year mark of the COVID-19 pandemic, I dare say things are beginning to normalize again. Our patients are coming back for treatment, many interested in cosmetic dentistry after all of the time on zoom. Some principles have not changed, however, and those include strict infection control protocols. Dr. John Molinari has been our resident expert throughout the pandemic, and we are so very grateful to have him as a resource and educator for our readers. In this issue we discuss masks, respirators, surface disinfection, and waterline testing and treatment. Keeping your team united and feeling safe is of utmost importance, and it increases loyalty when your team understands the tremendous undertaking it has been to keep patients safe during this challenging time. As always, we thank you for reading, and welcome you to reach out to us with any questions at connect@dentaladvisor.com, or to me personally at drbunek@dentaladvisor.com.

—*Sabiha S. Bunek*

Ask the expert

John A. Molinari, Ph.D.



Dr. Molinari earned a PhD in Microbiology from the University of Pittsburgh and subsequently worked as a faculty member in the School of Dental Medicine. He is currently Professor Emeritus at the University of Detroit Mercy, where he served for 32 years in the School of Dentistry as Professor and Chairman of the Department of Biomedical Sciences and Director of Infection Control. Later, he was Infection Control Director for DENTAL ADVISOR where he was involved in research on newly developed infection prevention technologies and products. He has also been an infectious disease consultant for the CDC, ADA, and regional hospitals. Dr. Molinari has published over 500 scientific articles, text chapters, and abstracts in the areas of microbiology and immunology, and lectures nationally and internationally on topics dealing with infectious diseases and infection control.



N95 Duckbill Face Mask



Surgical Face Mask

Q

What is the difference between a surgical respirator (N95) and a surgical mask?

A

N95s provide the highest level of protection against the smallest particles (which are airborne aerosols 5 microns or less). Surgical masks will protect against spatter and droplets but are not designed either in fit or capability to protect against small, fine aerosols.

*It has been recommended to wear **N95 in dentistry any AGP** (Aerosol Generating Procedure) due to their abilities to protect against airborne pathogens.*

Surgical Masks vs Surgical Respirators (N95)



Surgical Face Mask

KEY DIFFERENCES

Supply chain issues causing a shortage of Surgical Respirators no longer exist. Prior to the pandemic, few if any dental professionals understood the differences between masks and respirators. Although N95s are recommended for the majority of dental procedures, many practices are still using surgical masks and face shields.



N95 Style Respirators

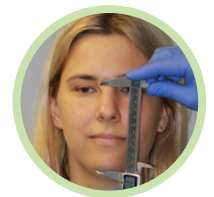
SURGICAL MASKS:

- **Are available in three levels of protection** (Level 1, Level 2 and Level 3).
- **A feature of surgical masks is the earloop style** with an adjustable nose piece.
- Some brands of ear loop masks offer **adjustable metal bands at both the top and bottom of the mask** which provide a better fit.
- Surgical masks available in dentistry are also **fluid resistant which prevents wicking** (which is drawing liquids to the fabric the mask is made of). That means the masks protected fibers swell, reducing filtration efficacy.



RESPIRATORS:

- Designed to fit **snugly and filter out the majority** of airborne particles.
- **Every team member in the practice requires medical clearance** from their physician to wear a respirator.
- **Every team member utilizing a respirator must be initially fit tested** to determine efficacy of the respirator.
- **Once the fit test is successful, the type of respirator, including brand and model, must be documented** in the practice's written respiratory protection program specific to that employee.



Surface disinfection: The facts

Do surface disinfectants work?



- Surface disinfectants are **very effective when used properly**.
- Instructions for use **must be read and followed for a product to be effective** as claimed.
- Note the contact time the surface should remain wet. The **disinfectant has to have time to kill** the virus indicated.
- Intermediate-level disinfectants are **strong enough to kill mycobacteria** as well as all of the less resistant microorganisms, including viruses.

What level of disinfectant is needed?

	What it kills:	Intermediate-level (hospital disinfectant with a tuberculocidal claim (TB))	Low-level (hospital disinfectant)
HIGH RISK	MYCOBACTERIA • Mycobacterium tuberculosis	✓	
	NONLIPID OR SMALL VIRUSES • Polio virus • Coxsackie virus • Rhinovirus	✓	
	FUNGI • Aspergillus • Candida	✓	
	VEGETATIVE BACTERIA • Staphylococcus species • Pseudomonas species • Salmonella species	✓	✓
	LIPID OR MEDIUM-SIZED VIRUSES • Human immunodeficiency virus • Herpes simplex virus • Hepatitis B and C	✓	✓
	CORONAVIRUS including SARS-CoV-2 (COVID-19)	✓	✓
LOW RISK			

Adapted from CDC Guidelines for Infection Control in Dental settings

OPTIM® 1 (SciCan)

Award-Winning Features:

Quick and Effective:

As tested in DENTAL ADVISOR Microbiology Laboratory, **Optim 1** was the only disinfectant to successfully clean and remove proteins with a single application.

Non-Toxic and Non-Irritating:

Optim 1 breaks down into water and oxygen, making it safe for all indications.

Evaluator Comments:

- "Extremely quick and has broad spectrum effectiveness. I trust this product."
- "No smell, no residue."



ABCs of Surface Disinfection:

- Clean it First!** Any visible debris **must** be cleaned from the surface before disinfecting.
- If no blood or OPIM** (Other Potentially Infectious Material) is present, disinfect using a low- or intermediate-level of disinfectant. **Surface must stay wet** to be effective against the given microorganism. If your product evaporates before the listed contact time, it will not be effective.
- If a surface has visible blood or OPIM,** disinfect with an intermediate-level product. Adhere to the same principle: Surfaces must be wet for the entire contact time to be effective.

For more information: <https://www.dentaladvisor.com/evaluations/optim-1-2021-product-award>

Waterline Treatment & Testing

Dental Unit Waterline concerns



Untreated dental units cannot reliably produce water that meets drinking water standards

Biofilms thrive in moist and warm environments, making the dental unit waterline a perfect environment

In their natural habitat, 99.9% of all bacteria live as a community and attach to surfaces as biofilms

Water coming into dental offices from city supplies contain bacteria and nutrients that support their growth.

Waterline contamination consists of slime-producing bacteria, fungi and protozoans.

Microbial counts can be > 200,000 cfu/ml within 5 days of DUW installation

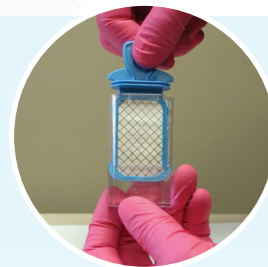
Immune compromised patients are at greater risk of opportunistic infections

Dental unit waterlines contain long lumens, with a high surface area for biofilms to develop

Dental water exiting unit can be 100's to 1000's times more contaminated than incoming tap water

Waterline Testing

Although waterline testing is not required by CDC or OSHA, it is recommended that Dental Unit Waterlines (DUWL) are properly maintained with water level output being less than ≤ 500 CFU/mL (drinkable water). Sterile water should be used for all surgical procedures. Waterline testing is available for both in-office and through mail service.



QuickPass from ProEdge Dental

Monarch Line Cleaner (Air Techniques)

The CDC recommends using water that meets EPA regulatory standards for drinking water (i.e., ≤ 500 CFU/mL of heterotrophic water bacteria) for routine dental treatment output water.

Monarch Lines Cleaner exceeds these EPA regulations and maintains CFU (colony forming units) counts of <200 CFU/mL with regular use in dental unit waterlines (DUWL).



- Powerful, chlorhexidine-based formula provides initial shock and weekly maintenance treatment in one solution without the use of harsh chemicals.
- Removes biofilm from DUWL containing odor causing bacteria.
- Replaces daily water cleaning tablet - leaving no residue in bottle.
- Ready-to-use. No mixing or diluting required.
- Fresh, minty taste.
- pH-neutral: Non-corrosive and gentle to equipment.
- Very economical: one 16.9 oz. bottle can treat a single operator for up to several months.
- Does not affect bond strength.
- Can be used with any type of independent water bottle systems.

For more information: www.airtechniques.com

Waterline Treatment Options



Various methods of treating waterlines are available including:

- Tablets for water bottles
- Solutions for water bottles.
- Straws for water bottles
- Installed cartridge-based systems
- Periodic shock treatments

Aoralscan 3 Scanning System

(Shining 3D Technology, Inc.)

Introduction:

The **Aoralscan 3** (Shining 3D Technology, Inc.) is a scanning system that can be used for orthodontic and restorative procedures. It is capable of ortho simulation as well as creating an oral health report (see Appendix A). It connects to a computer or laptop and is now available with an optional cart for portability. This system possesses a host of features such as A.I. technology to automatically identify and filter out unnecessary soft tissue data, motion sensing to advance to the next scan with minimal contact with the computer, and most importantly, fast and accurate scans.



Clinical Case

The patient presented with a symptomatic tooth #16 (Figure 1) with a large existing composite restoration. The patient had been experiencing biting sensitivity for several weeks along with transient cold sensitivity and it was determined that a full coverage crown was indicated. The mesial portion of the existing restoration was sub-gingival and exposing tooth structure for the crown margin would result in a deep margin. In addition to the deep margin on the mesial of the tooth, another challenge to scanning this case was access, as it was a wisdom tooth and the patient had limited opening.



Fig. 1: Tooth #16 pre-op

Procedure

Anesthesia was administered, and while the anesthetic was taking effect, the laboratory prescription was completed. The interface was very user friendly as it featured a simplistic design with color coding and large visuals. A monolithic zirconia crown was chosen as the substrate. The tooth was prepared for a full coverage restoration. Tissue management was performed utilizing a single cord technique with **Ginga-Plain** (GINGI-PAK) that had been soaked in **Hemodent** (Premier Dental). The cord was removed, and the tooth scanned, followed by the opposing arch and a bite (Figure 2).



Fig. 2: Tooth #16 crown preparation

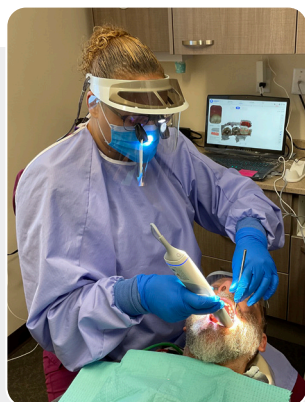


Fig. 4: Dr. Ona scanning

The **Aoralscan** features the option of a smaller head scan tip (Figure 3). This tip was chosen for this scan for better access due to the patient's limited opening (Figure 4). The **Aoralscan** tip and handle already have a slim profile, is very sleek and is compact compared to other scanners on the market. The smaller head was a wonderful option for cases such as this or for pediatric scanning. In addition, the tooth was scanned utilizing the A.I. mode for optimal margin recognition of the deep mesial margin. The scanning time was incredibly fast and with the motion sensing function it was easy to move from each scan by waving the scanner without having to touch the mouse or screen. The scan was sent to Apex Dental Milling (Ann Arbor, MI). The **Aoralscan 3** is open-source and cloud-based, so after the scan was sent to the lab the case was able to be accessed from the **Shining 3D** cloud.



Fig. 3: Aoralscan 3 has the option of two sizes of scan tips.

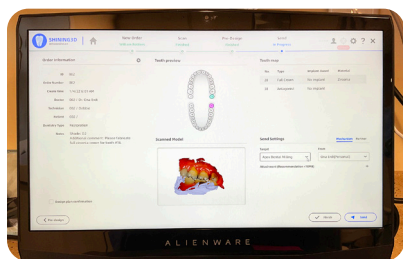


Fig. 5: Final prescription before going to the lab



Figs. 6 and 7: Final scans

Laboratory: Apex Dental Milling

Case data was submitted (Figure 5) electronically using the *Shining 3D* online portal. The scan data was downloaded and imported into the CAD software for processing. The scan data was sufficiently clear to accurately determine margin position, contact points, and alignment to the opposing arch. The identification of the margins position was aided by the crisp resolution of the color texture provided by the scanner. The crown was designed, and a model was created digitally using the CAD software. The crown was then milled, and the model was 3D printed. After sintering, the crown was checked for fit on the 3D printed model and characterized with stain and glaze.

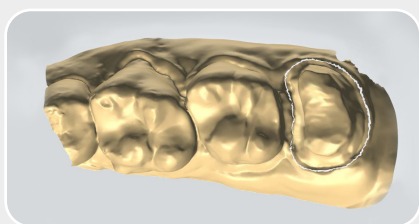


Fig. 8: Imported scan

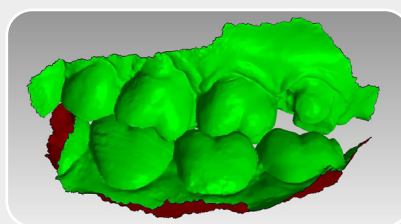


Fig. 9: Maxillary and mandibular arches in design phase

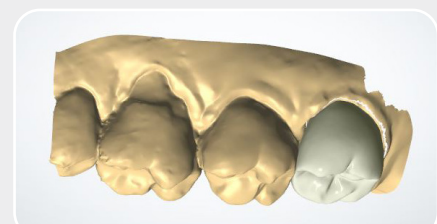


Fig. 10: Final crown design prior to milling

Restoration seating

The provisional crown was removed, and the permanent restoration tried in with the marginal fit, interproximal contacts, and occlusion evaluated. The permanent restoration fit perfectly with no adjustments required. The intaglio surface of the crown was cleaned with *Ivoclean* (Ivoclar) restoration cleaner, and the tooth was cleaned, dried, and isolated. *RelyX Universal* (3M) was applied using the self-adhesive technique. Excess cement was removed, and a final light curing was completed.



Fig. 11: Occlusal view of final restoration on 3D-printed model



Fig. 12: Final zirconia restoration

Conclusion

What sets the *Aoralscan 3* apart from other scanners (Fig. 13) on the market are its extremely fast, realistic scans coupled with motion sensing technology for easy, hands-free screen advancement and improved infection control. This scanner has a long, sleek wand with two head size options that make scanning comfortable for patients and improves the maneuverability, making scanning even faster. The completely adjustment-free fit of the final restoration with a deep margin demonstrates the accuracy of this scanner and software of the *Aoralscan 3*.

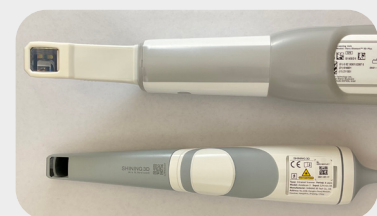


Fig. 13: Sleekness of Aoralscan 3 (bottom) compared to competitor scanner

Bond Strength of G2-BOND Universal

M. Cowen, D. Graham, J.M. Powers

Introduction:

G2-BOND Universal is the latest 2-bottle addition to GC's adhesive portfolio to compete with self-etch and etch and rinse system. The primer has optimal hydrophilic properties to increase dentin penetration for sealing, strength and self-etching properties, while the HEMA-free hydrophobic layer reduces hydrolytic degradation for increased durability and interfaces with composite. DENTAL ADVISOR tested the initial bond strength and bond strength after accelerated aging and 12-month water storage of this new system compared to gold-standard self-etching **Clearfil SE Bond 2**, and Etch and Rinse **Optibond FL**.

Experimental Design:

MATERIALS:

Bonding Agents: **G2-BOND Universal** (GC America), **Clearfil SE Bond 2** (Kuraray), **Optibond FL** (KaVo Kerr)

Composite: **G-aenial Universal Injectable** (GC America)

TEST PARAMETERS:

Substrates: Human Superficial Dentin, Human Ground Enamel

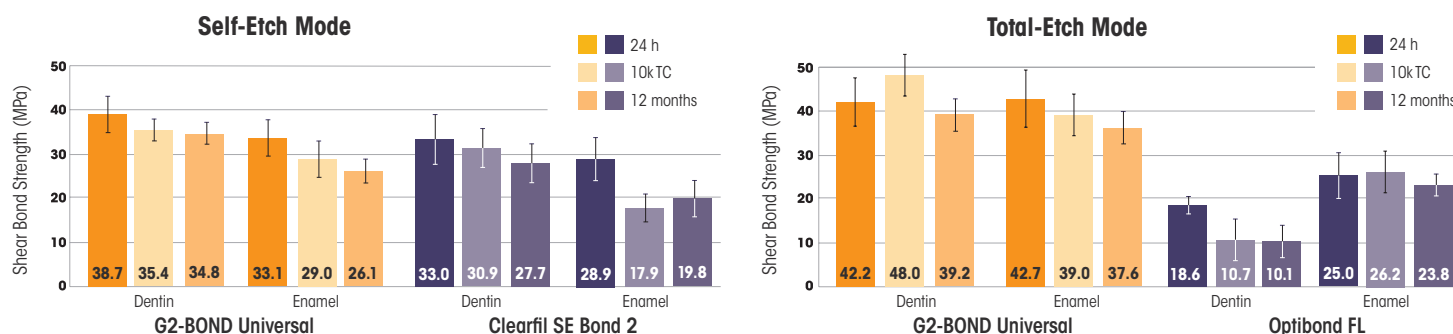
Etching Mode: Self-etch, Total-etch

Storage Conditions: 24 hours, 10000 Thermocycles (10k TC), 12 months



Methods:

Direct Shear Bond Strength [n=8] per bonding agent to dentin, enamel with self-etch and total-etch modes: Human adult molars, sterilized in a 1 % Chloramine T solution, and stored in deionized water were embedded in acrylic resin discs and ground through 600-grit SiC paper to form bonding substrates of superficial dentin and ground enamel. Specimen surfaces were treated and bonding agent placed according to manufacturer instructions. **G-aenial Universal Injectable** was then placed on top of the bonding agent utilizing the Ultradent Shear Test mold and jig to produce a 2.38 mm diameter shear test cylinder according to ISO 29022:2013. The cylinder was light cured for 20 seconds while in the mold. The specimens were then transferred to a 37°C deionized water bath for 24 hours storage until testing or thermocycling. Thermocycling was performed by transferring specimens between a 5° C and 55° C water bath with a 20s dwell time for 10000 cycles. Specimens were also stored for 12 months in distilled water at 37°C with weekly water change.



Results:

No application issues were observed with **G2-BOND Universal** and achieving a consistent bonding film thickness was simple.

Conclusion:

G2-BOND Universal performed better than **Clearfil SE Bond 2** and **Optibond FL** tested in their respective etching modes to dentin and enamel in immediate 24h shear bond strength and after accelerated aging and 12 month storage.



45 CLINICAL EVALUATORS

2707 TOTAL USES

93% CLINICAL RATING

Key features: Healthcare grade disinfectant • Pre-soaked wipes
• Fast contact times of 2 minutes or less

Description

Purell® Healthcare Surface Disinfecting Wipes are a broad-spectrum healthcare grade disinfectant:

- Effective against bacteria, enveloped viruses, non-enveloped viruses, and bloodborne pathogens
- Category IV: EPA's lowest toxicity rating
- 20% ethyl alcohol
- Rapid kill times of 1-minute or less for 30 organisms and 2-minute kill time for remaining
- Kills SARS-CoV-2 in 30 seconds
- Overall kills 36 organisms

Indications

- Compatible on most hard, nonporous surfaces and electronic devices.
- You can use these wipes on food-contact surfaces, with no rinse required.

Unique Attributes

- Large wipes that feel like cloth
- Saturated enough to cover a large surface area with one wipe



Clinical Tip

- As with any alcohol-based surface disinfectant, make sure to completely close the lid between uses to avoid evaporation of the alcohol.

"EXCELLENT PRODUCT WITH BRAND RECOGNITION. PATIENTS LIKED THAT."

Evaluators' Comments

"I feel confident that pathogens are getting killed and killed fast, but they also don't feel super harsh like other wipes."

"My dental assistant loves these wipes - less odor and easy to use."

"The saturation level was perfect, not too wet or dry. The size of the wipe enabled me to use one wipe to clean an entire operator."

"The material and size of the wipe are better than any other brand of wipes we've used."

"Non-staining on surfaces."

"Scent could be 'cleaner'."

"There was a bit of residue left behind on my equipment, but it wasn't any worse than what I find with my current product."

Consultants who would:

89% Recommend to a colleague

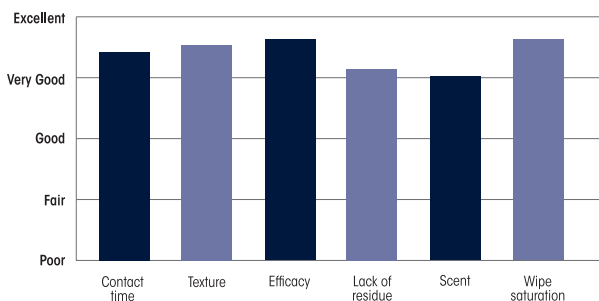
Consultants who would want to stock in office:

50% Yes, instead of current product

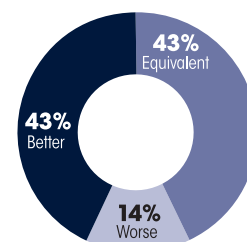
34% Yes, in addition to current product

2% I might want to order this product for certain cases

Evaluation Summary:



Compared to Competitive Products:





12 CLINICAL EVALUATORS

198 TOTAL USES

91% CLINICAL RATING

Key features: Universal composite • Simplified shade system
• Highly esthetic

Description

aura eASY is a universal restorative material:

- Four shades cover the 16 VITA Classic shades
- Each aura eASY shade is equally spaced out in color intensity, allowing for shade customization
- High-gloss finish
- No slumping - holds its shape

Indications

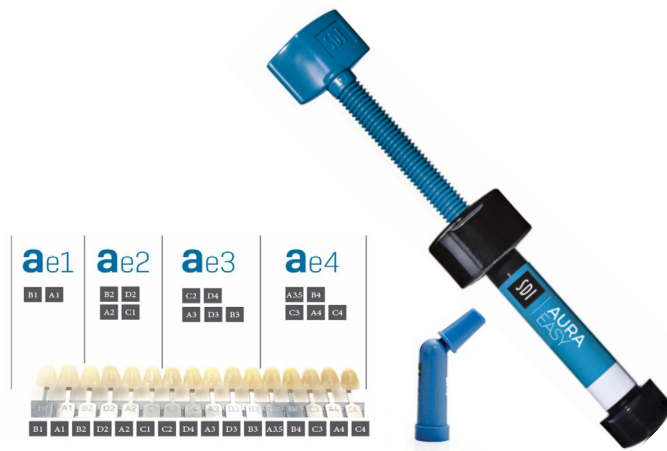
- Anterior and posterior restorations
- Indirect inlays, onlay, and veneers
- Core build-up
- Splinting
- Sandwich technique with glass-ionomer

Unique Attributes

- The simplified shade system is based on color intensity (lightest to darkest), which is very intuitive.
- The finish and polish with this system is outstanding and achieves a high gloss quickly and easily.



Photos courtesy of Dr. Kris Bano



Clinical Tips

- Try a composite warmer if you like your composite less stiff and more malleable. This material is a bit stiff.
- Think about matching a patient's shade like a gradient - 1, 2, 3, 4 and quickly you are done.

"BEAUTIFUL
OPTICAL
QUALITIES."

Evaluators' Comments

"This product really helps you streamline your inventory. And depending on your handling preference, is easy to place and is not sticky."

"Less shades to incorporate and great chameleon effects to mimic the natural shades of teeth."

"It exhibited predictable color match."

"Their system of using 4 shades for all 16 shades is very intuitive and works great in the posterior."

"Great esthetics."

"It blended and polish well."

"It is rather stiff. I would like it if it was a bit creamier for better handling and prep adaptation."

Consultants who would:

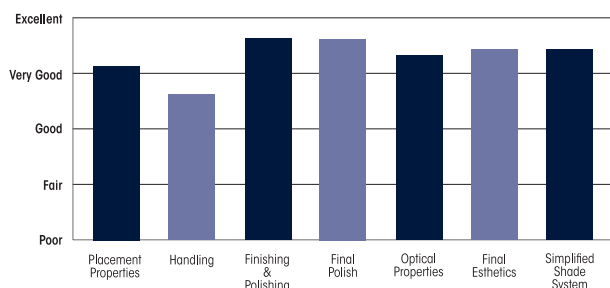
75% Recommend to a colleague

Consultants who would want to stock in office:

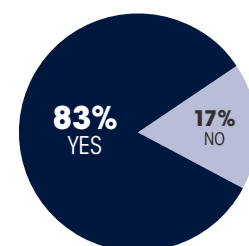
25% Yes, in addition to current product

33% I might want to order this product for certain cases

Evaluation Summary:



Did you feel you were able to achieve a natural looking result with this material?





32 CLINICAL EVALUATORS

759 TOTAL USES

91% CLINICAL RATING

Key Features: Universal adhesive • Colorless • Effective on moist or dry dentin

Description

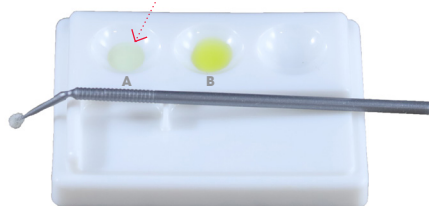
Ambar Universal APS Dental Adhesive is a universal adhesive:

- Universal adhesive: use under different acid conditioning protocols (self-etching, selective-etching on enamel or total-etching) and on different surfaces
- APS system: excellent performance at any moisture level of dentin. Perfect for intracanal application
- Adhesive is virtually colorless – does not interfere with esthetic restorations or cementation
- It is compatible with dual-, self- or light-curing resin cements

Indications

- All classes of direct restorations with composite (classes I, II, III, IV and V)
- Adhesive cementation (together with resin cement) of prosthetics (intraarticular posts/cores, crowns, onlays/inlays, veneers etc.), fiberglass, ceromer, ceramic, resin and metal
- Adhesive repairs of ceramic and composite restorations
- As a primer for metal or ceramic restorations (etching or non-etching, note: no silane)

Ambar Universal APS Adhesive shown below in well A is practically clear compared to product in well B.



Unique Attributes

- This adhesive is virtually colorless, which makes it ideal for highly esthetic restorations.
- The ability to use this product with different levels of dentin moisture adds confidence that the adhesion will still be high, even if the tooth is a little moister or a little drier than ideal.

"AMBAR'S UNIVERSAL APPLICATIONS MAKE IT SUITABLE FOR MULTIPLE CLINICAL SITUATIONS."

Evaluators' Comments

"Lack of color is great for anterior restorations."

"I found it to be very adhesive."

"I experienced zero sensitivity and had no de-bonds with this product."

"I liked the ease of handling and that it was invisible after light curing."

"Ambar is a winner."

"Good film thickness and works well in moisture."

"The dispensing could better - the tip does not control the drops."

"Application was a bit difficult, as the material felt very thick."

Consultants who would:

90% Recommend to a colleague

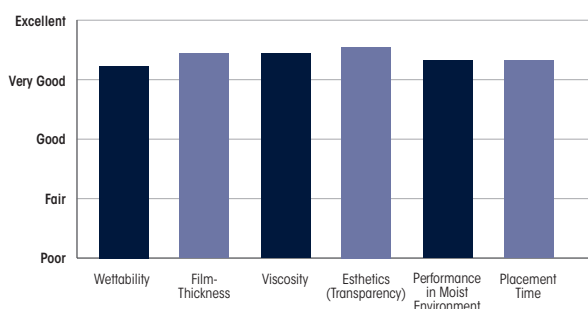
Consultants who would want to stock in office:

20% Yes, instead of current product

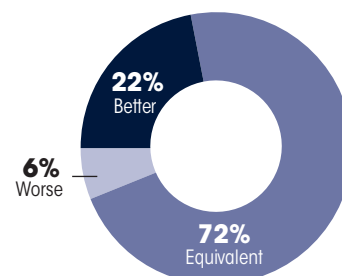
57% Yes, in addition to current product

13% I might want to order this product for certain cases

Evaluation Summary:



Compared to Competitive Products:



Komet Single-Patient Use Operative Diamonds

Komet kometusa.com

++++ 1/2



dentaladvisor.com

RATING SYSTEM: Excellent + + + + + Very Good + + + + Good + + +



63 CLINICAL EVALUATORS

1506 TOTAL PROCEDURES

94% CLINICAL RATING

Key features: Diamond burs • Single-patient use • Pre-sterilized



Description

Komet Single-Patient Use Operative Diamonds:

- Individually wrapped and pre-sterilized
- Higher initial sharpness than competitive brands
- Available in 248 different shapes and sizes (4 tested in this evaluation)



Indications

- Any dental operative procedure requiring a diamond bur

Unique Attributes

- Single-patient use
- Sharpest on the market
- Pre-sterilized

Clinical Tips

- They cut well, even when cutting metal.
- Very helpful with removing old crowns and preps.

"CONSISTENTLY CUT VERY FAST AND SMOOTH."

Evaluators' Comments

"Best cutting efficiency for any single-use burs that I have used."

"Cut smooth with no chatter on the teeth."

"Excellent quality. They were virtually indistinguishable from multi-use burs."

"In today's heightened sensitivity to infection control, a single-use bur is a huge advantage."

"They cut better than a typical single-use bur. I was able to do an entire quadrant and felt like it was just as good at the end of the procedure as it was at the very beginning."

"With multi-use burs, sometimes you find it needs to be replaced as you get started. It was nice knowing that I definitely had a sharp and new, ready to cut bur for the procedure."

"I require a lot of different shaped burs for direct and indirect procedures, endodontics, and surgical procedures; so, I prefer having a bur block with everything I need on it. It would take a considerable amount of time to set up for each procedure with only single-use burs."

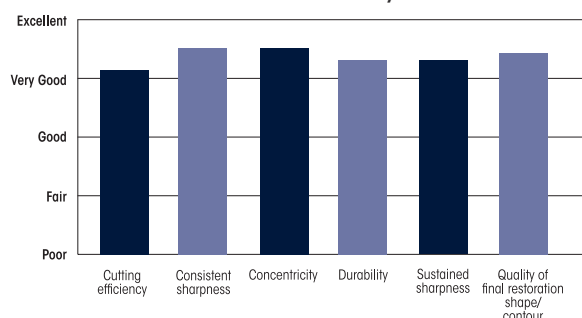
95% Consultants who would:
Recommend to a colleague

18% Consultants who would
want to stock in office:
Yes, instead of current product

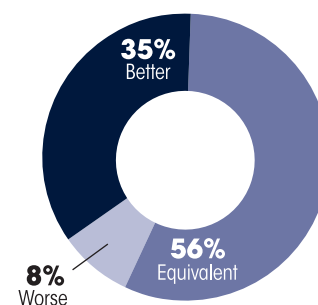
58% Yes, in addition to current product

19% I might want to order this product
for certain cases

Evaluation Summary:



Compared to Competitive Products:





21 CLINICAL EVALUATORS

225 TOTAL USES

93% CLINICAL RATING

Key features: Adhesive cement • Initiator system for optimization of adhesive bond

Description

Visalys® CemCore is a dual-curing cement:

- For adhesive cementation of indirect restorations and root posts.
- Contains fluoride.
- Includes an initiator system for the optimization of the adhesive bond that utilizes Active Connect Technology (ACT).
- **Visalys® Restorative Primer** (included) is recommended as the primer for the restoration surfaces.
- For use in combination with **Visalys® Tooth Primer** (included).
- Available in five shades: Universal (A2/A3), Opaque, Translucent, Bleach, and Dark (A4).

Indications

- Crowns, bridges, inlays, onlays, veneers and adhesive bridges made of metal, ceramic, composite, hybrid and oxide ceramics.
- Root posts and indirect core build-ups.

Unique Attributes

- Adhesive cement system with tooth and restoration primer to maximize bond.
- An adhesive cement with easy cleanup of excess material.

Clinical Tips

- Works good for seating multiple crowns at once.
- Perfect for short preparations.



“ON SOME OF MY TOUGHEST CEMENTATION CASES, THIS PRODUCT PERFORMED WONDERFULLY.”

Evaluators' Comments

“It is the perfect viscosity and additionally we experienced no high occlusion after cementation due to the thin film thickness.”

“I like the consistency of this product; it has the same cementation protocol for all restorations.”

“This material is very easy to apply and dispense.”

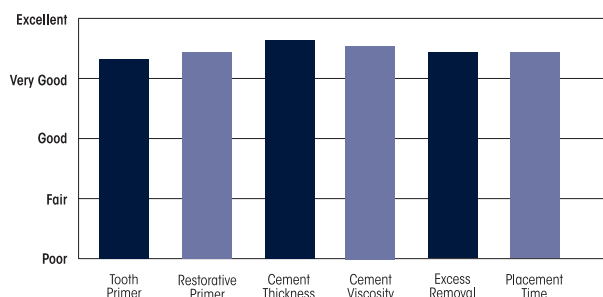
“Easy clean up around the margins.”

“Great for use for posts as well.”

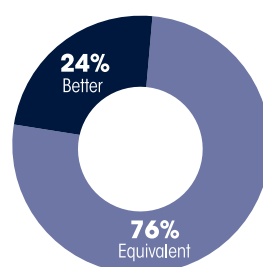
“I felt the multiple steps and multiple bottles was complicated.”

“Requires refrigeration”

Evaluation Summary:



Compared to Competitive Products:



Consultants who would:

95% Recommend to a colleague

Consultants who would want to stock in office:

25% Yes, instead of current product

50% Yes, in addition to current product

15% I might want to order this product for certain cases

3M™ RelyX™ Universal Resin Cement and 3M™ Scotchbond™ Universal Plus Adhesive

ECONOMIC AND EFFICIENCY IMPACT SURVEY

3M™ Oral Care

3M.com



dentaladvisor.com

RATING SYSTEM: Excellent + + + +

Very Good + + + +

Good + + +



Introduction

A 1-year follow-up was conducted with 30 clinical evaluators of **Scotchbond™ Universal Plus Adhesive**, **RelyX™ Universal Resin Cement** and the combined clinical solution of these materials in order to determine economic and efficiency impacts of integrating these materials on the dental practices that evaluated them.

Scotchbond™ Universal Plus Adhesive

Scotchbond™ Universal Plus Adhesive, is a light-cured, single component dental adhesive that is compatible with light-, dual-, and self-cured composite materials, cements and core build-up materials utilizing any etch technique. It is also the first radiopaque universal adhesive.

Percentage of respondents | **Using Scotchbond™ Universal Plus in my practice:**

- 70%** Makes procedure workflows for my team less complicated
- 73%** Reduces the incidence of mistakes by having a simple, consistent workflow
- 77%** Makes my procedures easier
- 80%** Supports minimally invasive dentistry approaches



What did you like best about Scotchbond™ Universal Plus Adhesive?

- Ease of use for all applications.
- Clear after polymerization.
- High bond strength.
- No post-operative sensitivity.
- Great product that works! Good workability and reliability.
- As easy to use as **Scotchbond™ Universal**. There was not a significant difference in feel, application, or otherwise.
- Reliability.
- Consistency.
- Thin film thickness.
- Single bottle, steps are short and after using, virtually no post-op sensitivity.
- Multiple indications.
- Very durable bond strength.
- Thin film thickness. Lack of sensitivity.

RelyX™ Universal Resin Cement

RelyX™ Universal Resin Cement is a dual-cure universal cement with an innovative syringe design. It can be used in either adhesive or self-adhesive mode.

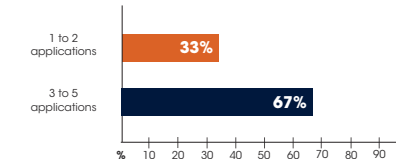
Percentage of respondents | **Using RelyX™ Universal in my practice:**

- 93%** I can reduce the amount of cement used per procedure
- 71%** The time necessary to train procedure workflows to team members can be reduced
- 64%** My workflows are more streamlined (fewer steps, less time, etc.)

Percentage of respondents | **Do you feel that you obtain more usable cement per syringe with RelyX Universal's reduced waste tip?**

- 86%** Of consultants said, yes

Approximately how many additional applications per syringe do you feel you obtained from the RelyX™ Universal Resin Cement syringe's reduced waste tip compared to what you are currently using?



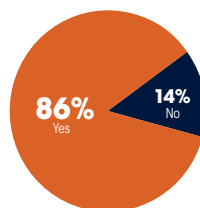
Combined Restorative Solution

The **RelyX™ Universal Resin Cement** and **Scotchbond™ Universal Plus Adhesive** simplifies cementation procedures with its unique, material-saving delivery system. Ideal for virtually all resin cement indications, from glass ceramic veneers to zirconia crowns and endodontic posts.

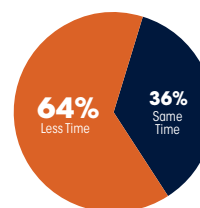
Percentage of respondents | **Using the combined restorative solution in my practice:**

- 93%** Reduces the time necessary to train team members in procedure workflows.
- 93%** Reduces the potential for mistakes
- 86%** Makes results of my procedures more predictable.

Using the combined restorative solution: Do you feel you can reduce the amount of expired product (cement and adhesives) that have to be discarded?



How does application time of the combined restorative solution compare to other adhesive resin cement brands?



Approximately how many expired products (cements and adhesives) did you have to discard last year prior to using this combined restorative solution?



Conclusion

These materials, both individually and as a combined restorative solution, improved practice efficiency by reducing mistakes and simplifying team training and streamlining workflows. The tip on the newly designed **RelyX™ Universal Resin Cement** syringe has been shown by the DENTAL ADVISOR's independent biomaterials lab to reduce waste which improves sustainability and has a decreased environmental impact. Additionally, they showed a positive economic impact by reducing the amount of material waste as well as reducing the number of expired products in the practices surveyed.



FOCUS

ON THE FUTURE



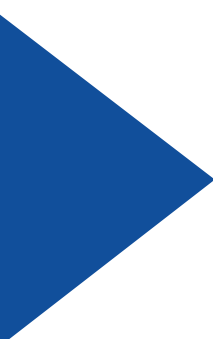
Join us for the 2022 OSAP Annual Conference featuring top speakers from the CDC, NIOSH, FDA, and more! Learn about current and emerging issues in dental infection prevention and safety and receive resources and tools to optimize compliance.

Earn up to 17.5 ADA CERP CE credits

Participate in daily networking and social opportunities

Early-bird registration rates starting at **\$615 for members/ \$775 for non-members** end April 21, 2022.

Register at: www.osap.org/annual-conference

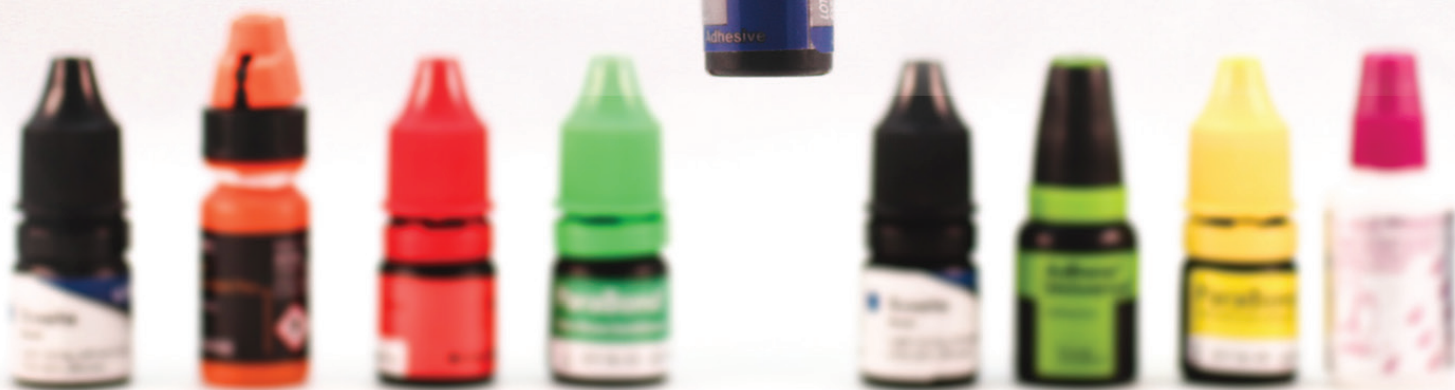


June 16-18, 2022
Minneapolis, MN
& On-Demand

2022 OSAP
ANNUAL CONFERENCE

DID YOU KNOW?

Many products evaluated by DENTAL ADVISOR have free samples available to our readers. For more information, go to dentaladvisor.com/clinical-evaluations/request-a-sample



DA DENTAL ADVISOR
dentaladvisor.com

SPECIAL THANKS TO:

Select Senior Clinical Evaluators (Over 20 years):

R. Fisher, OH · E. Katkow, MD · J. Lockwood, MI · G. Poy, MI · R. Trushkowsky, NY · P. Yaman, MI · K. Baker, TX · F. Berman, PA · J. Bostic, OH · L. Brimhall, MT · M. Briskin, NY · W. Brownscombe, MI · R. Ciccone, MI · C. Colbert, MI · M. Conrad, PA · R. Dost, VA · J. Doueck, NY · M. Eannaccone, NY · K. Fairbanks, MI · M. Feinberg, NY · K. Fischer, IN · G. Franco, NY · N. Garlisi, OH · S. Graber, IL · P. Grandsire, NY · E. Gutman, NY · D. Haas, Ontario · K. Hamlett, TX · 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. 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 · 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 · G. Reskakis, NY · K. Schwartz, FL · J. Shea, MO · B. Shumaker, NJ · B. Sims, NY · P. Symeonides, NY · H. Tetelman, OH · C. Trubschenck, CA · S. Ura, NH · W. Walcott, MI · M. Waranowicz, MI · L. Wee, MI · H. Yeung, CA · P. Zanetti, MI · S. Zimmer, MI

Clinical Evaluators (19 years or less):

D. Aaron Matatiah, CA · A. Albright, NY · B. Argersinger, NC · R. Arif, OH · P. Arsenaault, MA · G. Ash, MI · S. Baker, GA · M. Bannan, NC · B. Barricklow, OH · L. Barloszewicz, MI · B. Bauer, IL · J. Bechtel, MI · J. Bechtel, MI · M. Best, MI · L. Bishop, MI · T. Bizga, OH · G. Bloomfield, MI · G. Bonior, MI · C. Brown, LA · E. Brust, MI · S. Bunek, MI · J. Bunek, MI · J. Bush, PA · H. Cadorette, MI · M. Capalbo, RI · M. Caligiuri, CA · P. Campo, NY · P. Cracchiolo, MI · D. Chacko, TN · P. Chaiken, IL · R. Cherry, FL · R. Chuang, CA · M. Connelly, MI · S. Crawford, MI · J. Curley, NC · W. K. Dancy, GA · S. Dillingham, NY · K. Dobracki, MI · S. Doniger, IL · J&E Duski, MI · A. Durko, MI · M. Egbaria, IL · M. Elford, MI · O. Erdt, MI · K. Evanoff, MI · M. Evers, OH · F. Fauchini, MI · F. Falcao, FL · L. Feldman, NJ · G. Fink, DE · 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 · K. Grindling, MI · P. Gronet, KY · R. Grossman, PA · H. Gulati, MA · F. Haddad, MI · G. Haddad, CA · J. Haddad, MI · A. Hakhamian, CA · J. Hamerink, MI · W. Hanna, MI · A. Harris, OH · J. Hastings, CA · A. Hodges, NC · C. Huang, CA · M. Huberty, WI · J. Ireland, MI · S. Irwin, NJ · C. Jaghab, MI · J. Jaghab, MI · W. Jenkins, MI · T. Jolly, TN · R. Juluri, IL · M. Kachi-George, MI · D. Kapp, NY · J. Kane, MI · Y. Kang, MA · J. Karam, MI · G. Karauzas, MI · E. Kelly, GA · J. Kelly, GA · L. Kemmet, MN · M. Koczarski, WA · L. Knowles, MI · B. Kolb, MI · GA Krishnan, CA · E. Kuns, OH · C. Laird, OR · T. Lam, CA · R. Le, NC · I. Levine, NY · E. Lowe, BC · CAN · J. LueYen, GA · A. Malkis, NY · C. Manduzzi, MI · J. Mangutz, MI · K. Mantzikos, NY · B. Mayday, MI · T. McDonald, GA · J. McLaren, MI · M. McMullin, MI · G. Meylan, MI · M. Migdal, MI · M. Miller, NC · J. Mills, MI · J. Minsky, CA · L. Montes, NY · A. Moore, NC · L. Motyl, MI · M. Murphy, MI · M. Murrell, MI · L. Musgrave, MI · M. Nasif, MI · B. Neren, NY · J. Neuman, MI · J. Orlitsky, FL · J. Olsen, MI · E. O'Neil, MI · F. Orlando, NY · S. Owens, MI · A. Paal, TX · P. Panchal, NC · R. Parikh, IL · J. Parrott, MI · U. Patel, CA · D. Perkins, MI · N. Pelachyk, MI · B. Peterson, MD · W. Phillips, MI · S. Picazio, NJ · B. Picot, NC · C. Pike, MI · C. Piontkowski, MI · B. Pittsley, MI · J. Poskocim, IL · B. Pourmaras, SC · A. Prince, UT · D. Radtke, MI · G. Ramos, NY · C. Ramsey, FL · G. Rashall, TX · S. Reddy, MI · N. Rego, CA · J. Riggs, MI · M. Rojas, IL · J. Rowe, AR · J. Rubin, DC · A. Saddy, MI · S. Salhadar, MI · P. Saurer, OH · P. Scallia, MI · C. Scanlon, MI · J. Schou, MI · K. Schier, MI · A. Schraner, NY · V. Scolla, CA · L. Seluk, MI · R. Selvan, NJ · Y. Shaheen, MI · M. Shapiro, MI · A. Shemesh, IN · E. Simanian, CA · S. Simos, IL · J. Slatkoff, FL · J. Smith, MI · C. Stevens, OK · B. Stieper, MI · R. Surana, CA · G. Sutton, CA · G. Tarantola, FL · T. Teel, IN · C. & L. Thorpe, MI · L. Trost, IL · S. Uchil, MI · A. Valentine, MI · H. Vann, MS · C. Vinkovich, OH · J. Weinfield, MI · B. Wilk, PA · K. Wilson, MI · D. Wolf, MA · W. Wright, CA · Y. Yi, MA · D. Young, MI · S. Yun, MI · M. Yurth, WA · J. Zanetti, MI · A. Zucker, OH

Laboratory Consultants: Apex Dental Milling, MI