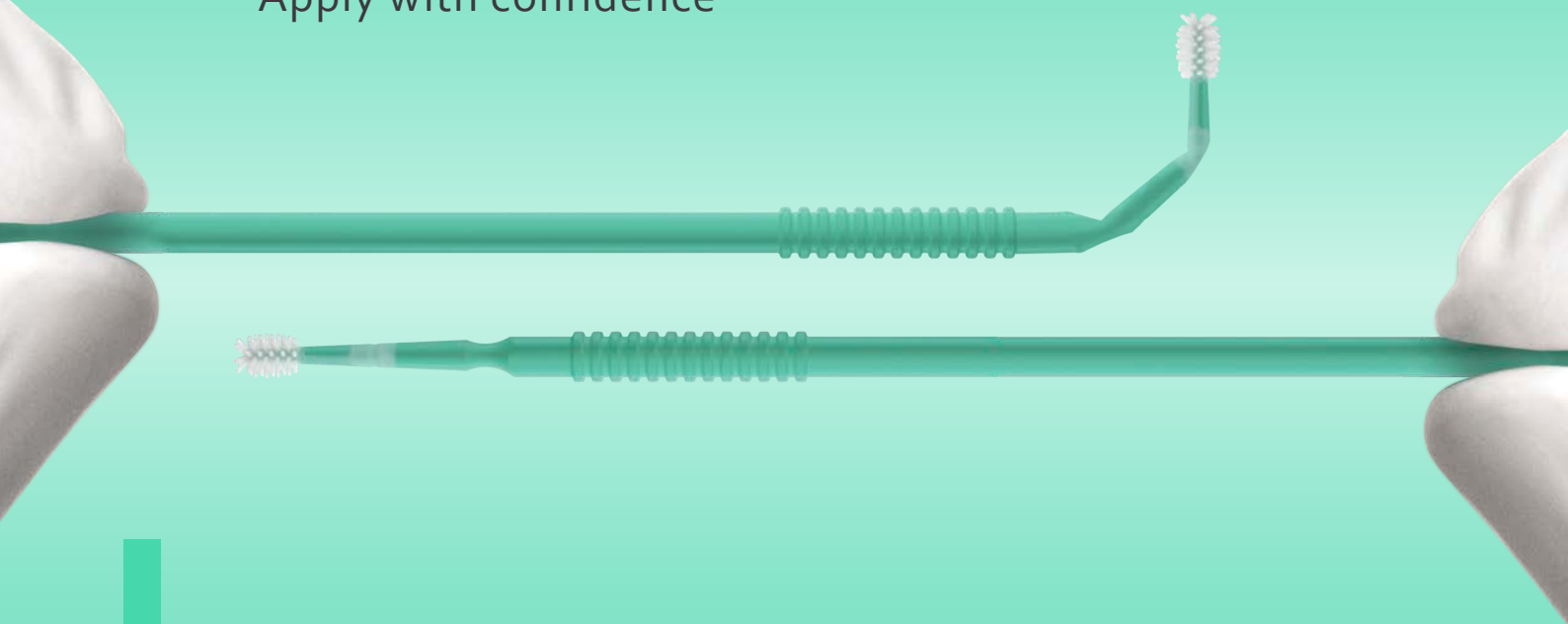




ZerofloX™

Apply with confidence



medmix Dental Scientific **Report**

Vol. 01/2026

English



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FORWARD



Over the past three decades, dentistry has undergone a remarkable amount of generational shifts —driven by innovations in material science, adhesive chemistries, and clinical protocols. A key focus has been simplifying and accelerating clinical procedures without compromising long-term clinical outcomes.

The evolution of esthetic, tooth-colored composite materials and adhesive luting techniques would not have been possible without the development of advanced adhesive systems and dental applicators. These tools are essential for helping to create strong, durable bonds between the tooth structure and restorative materials, ensuring the long-term success of both direct and indirect restorations.

Thanks to their versatility, dental applicators are used on a daily basis for a wide range of procedures and materials, including adhesive bonding systems, etchant gels (e.g., phosphoric acid), primers and conditioners (e.g., hydrofluoric acid, silane), composite resin-based fillings, cavity liners, fluoride varnishes, sealants, and desensitizers.

Our journey to develop a proprietary dental applicator was guided not only by technological innovation, but also by the market's demand for efficiency, simplicity, and reliability. To help meet these expectations, we focused on key performance criteria for dental applicators:

- Flock-free – contamination-free application
- Precise – the easy and controlled access
- Efficient – reduced material waste
- Universal – one size compatibility with a wide range of materials and procedures

The ZerofloX micro applicator, approved for clinical use in September 2023, has already demonstrated promising results in scientific and clinical evaluations. These findings continue to grow; and we are excited about the future potential of this product to enhance clinical workflows and patient outcomes.

This Scientific Report highlights some of the key insights collected so far. Your feedback and suggestions are always welcome, as your satisfaction and success remain our top priorities.

Sincerely,

Ayşe Sanlioglu
Head Business Segment Dental

INTRODUCTION

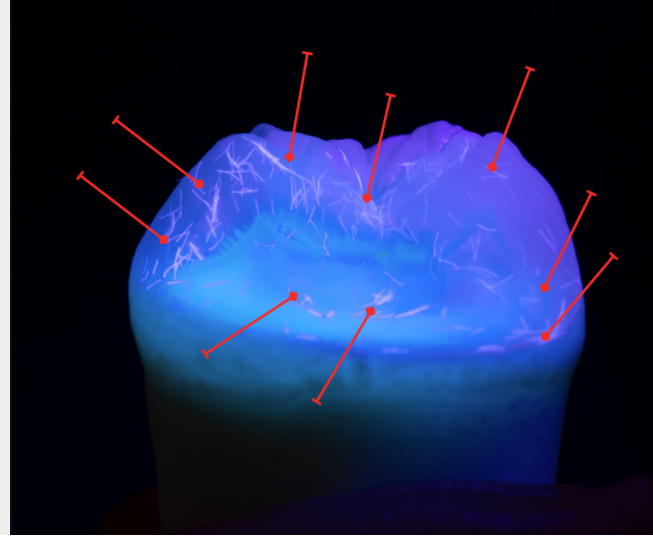


Fig. 1 Clinical application of Primer (Optibond FL) followed by fluorescent black-light to show lost fiber flocks using a conventional flocked-type micro applicator.

NYLON OR FLOCKED-TYPE MICROFIBERS

Modern dental applicators help play a crucial role in restorative dentistry, offering precision and control during the intraoral and extraoral application of various dental materials. These single-use, disposable tools are designed to support a wide range of procedures and materials, including:

- Adhesive bonding systems
- Etchant gels (e.g., phosphoric acid)
- Primers and conditioners (e.g., hydrofluoric acid, silane)
- Composite resin-based filling materials
- Cavity liners
- Fluoride varnishes
- Cements
- Sealants and desensitizers

Most commonly, dental applicators feature nylon or flocked-type microfibers affixed to the end of a plastic handle—either mechanically or with adhesive. Some designs allow the handle to be bent at designated points, improving access to hard-to-reach areas during treatment.

CLINICAL CONCERNS WITH FLOCKED MICROFIBER APPLICATORS

Despite their widespread use, flocked-type microfiber applicators present several limitations when used with today's advanced dental materials and techniques. These limitations can potentially impact both clinical performance and esthetic outcomes:

1. **Residual Debris** – Although few studies directly link residual microfibers to compromised clinical outcomes, many clinicians—especially those performing highly-esthetic restorations under magnification—report dissatisfaction with visible fiber remnants or residual debris embedded in the final restoration. These residues may contribute to discoloration and could reduce bond strength over time.*
2. **Excess Fluid Absorption** – Flocked microfibers tend to absorb more fluid than necessary. This can cause the shape of the applicator head to swell or deform, limiting its access into tight or irregular anatomical areas such as undercuts, distal posterior cavities, or Class V lesions.*
3. **Material Waste** – Adhesively-fixed microfibers often retain excess material, leading to increased waste and reduced efficiency during application.*

These challenges highlight the need for innovation in dental applicator design - one that aligns with modern clinical demands for precision, efficiency, and reliability.

At **medmix**, we understand these clinical challenges and applied our deep expertise in precision fluid application to drive meaningful innovation. Through our advanced engineering, material science and manufacturing capabilities, we developed the next-generation of dental applicator that empowers clinicians to deliver optimal results with confidence and consistency.

ZerofloX™

Apply with confidence



Soft, pliable head

with elastomer bristles for flock-free applications



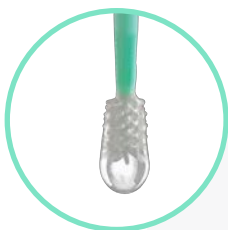
Two bending points

for easy intraoral access to difficult-to-reach areas



Universal size

simplifying clinical procedures and reducing inventory



Non-absorbing head

minimizing material waste up to 60%*

ZerofloX is designed for *efficient & flock-free* application of:

- Bonding agents
- Conditioners
- Etchants
- Fluorides
- Desensitizers
- Cavity liners
- Composite-based resins
- Cements
- Sealants

*Internal data available upon request.



Courtesy of Dr. Raphael Monte Alto

SCIENTIFIC INVESTIGATIONS



Study 1: Resistance to degradation - In vitro study of a flock free novel micro applicator.

Study location: Clinique universitaire de médecine dentaire /
University of Geneva – Geneva Switzerland
Study period: Nov. 2022
Study author(s): Bortolotto T



OBJECTIVE

To assess the resistance to degradation or amount of fiber flock shedding for 3 different applicator brushes after a scrubbing duration test.

- ZerofloX (medmix Switzerland AG)
- Microbrush®* applicator blue (BN 179854-1) – (Young Innovations)
- Microbrush®* applicator yellow (BN 177133-1) – (Young Innovations)



ZerofloX & Microbrush® applicator blue & yellow

METHOD

Six applicators for each brush type were mounted in a brushing machine or toothbrush simulator. One drop of dental adhesive Optibond FL (Kerr) was applied onto the prepared flat dentin surface of extracted human molars. The duration of brushing was 30s (clinically relevant timeline) with a brushing force of 100g and a circle brushing movement. Uncured bonding-covered dentin surface was observed afterwards with an optical microscope to detect the presence or absence of bristles from dentin surfaces.



Tooth brush Simulator (Z-3 SD Mechatronik)



Optical microscope



Microbrush® yellow lost bristle

RESULTS

- ZerofloX and Microbrush®* applicator blue demonstrated no lost bristles on the dentin surface after the application of the dental adhesive.
- Microbrush applicator yellow lost one bristle on dentin surface after the 30s scrubbing duration test.

CONCLUSIONS:

ZerofloX efficiently carried the adhesive and withstood the scrubbing duration test without fiber flock shedding. Microbrush®* applicator yellow lost bristles at a clinically relevant timeline of 30 seconds. Dental procedures involving adhesion may benefit from using a novel applicator that carries the adhesive and leaves no remnants on the surface.

REFERENCE

University of Geneva, Nov 2022¹

Study 2: Carrier capacity - In vitro study of a flock free novel micro applicator.

Study location: Clinique universitaire de médecine dentaire /
University of Geneva – Geneva Switzerland
Study period: Nov. 2022
Study author(s): Bortolotto T



OBJECTIVE

To measure the carrier capacity for 3 different applicator brushes using a series of weight test at different timeline by applying specific calculations, to determine the amount of adhesive liquid into the tooth cavity.

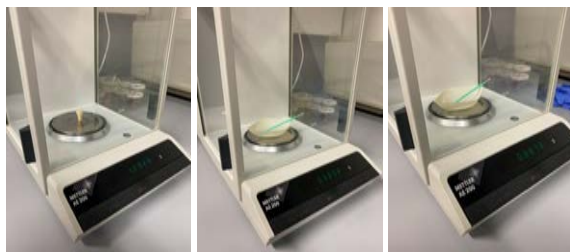
- ZerofloX™ (medmix Switzerland AG)
- Microbrush®* applicator blue (BN 179854-1) – (Young Innovations)
- Microbrush®* applicator yellow (BN 177133-1) – (Young Innovations)



ZerofloX & Microbrush applicator blue & yellow

METHOD

Ten applicators for each brush type were tested to determine their ability to carry one drop of the Primer & Bond adhesive material Optibond FL (Kerr). Duration of brushing for 5s was performed on non-absorbable surface of the Frasco model. For each drop of adhesive, the following weight data in grams (g) was extracted.



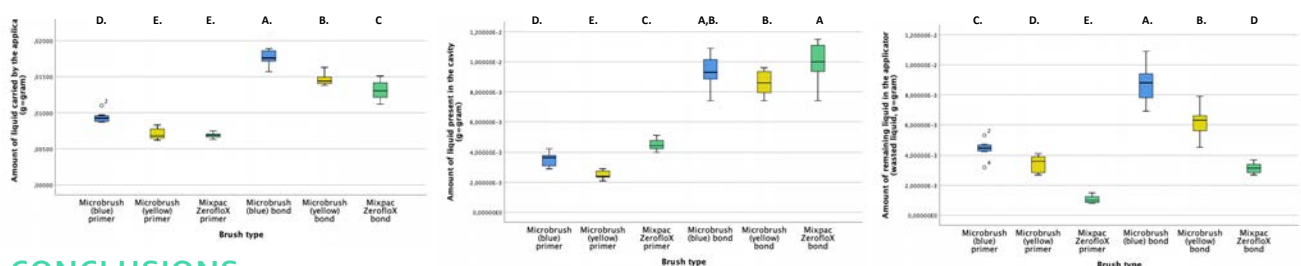
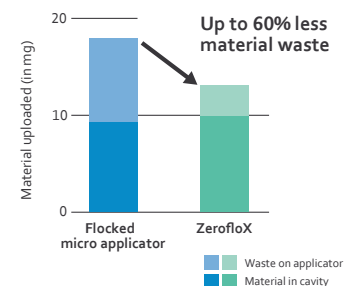
Left: weight of tooth with no adhesive
Middle: weight of applicator with no adhesive
Right: weight applicator with initial amount of adhesive



Left: application of primer in tooth cavity
Middle: weight of applicator with remaining primer
Right: weight of cavity with primer

RESULTS

- ZerofloX applicator
(compared to the commercially available Microbrush applicators tested)
 - carried/uploaded the least amount of adhesive material
 - released the maximum amount of adhesive material into the tooth cavity
 - left the lowest quantity of adhesive material on the application



CONCLUSIONS

ZerofloX carried (uploaded) the maximum of adhesive material into the tooth cavity with the least amount of waste left over on the applicator brush. ZerofloX ensures that the highest amount of dental adhesive is delivered into the tooth cavity preparation with a minimal amount of material waste. This represents an interesting amount of material-savings for the dentist.

REFERENCE

University of Geneva, Nov 2022

*Microbrush is the trademark of Young Microbrush LLC.

Liquid Carrying Potential - In Vitro Evaluation of ZerofloX™ an Innovative Applicator Brush.

Study location: The Dental Advisor – Ann Arbor, Michigan USA
 Study period: May 2023
 Study author(s): Cowen M, Powers JM



OBJECTIVE

To measure the extent that the applicator brushes absorb liquid adhesive onto the surface for 3 different applicator brushes.

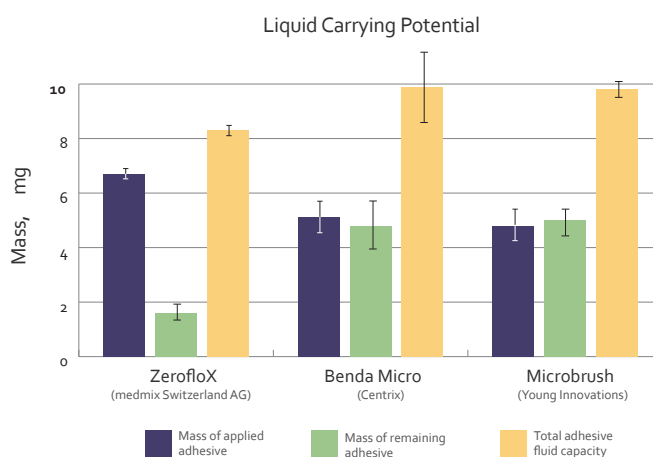
METHOD

Three different applicator brushes were weighed before and after being dipped into an excess of iBond Universal (Kulzer), and then spread onto a large flat tooth preparation and reweighed. The tooth preparation was cleaned and reused for all test replications for consistency. This allowed measurement as to how much liquid each brush picked up, placed, and remained on the brush.

- ZerofloX (medmix Switzerland AG)
- Benda* Micro (Centrix)
- Microbrush®* applicator yellow (BN 177133-1) – (Young Innovations)

RESULTS

- ZerofloX absorbed less overall liquid, but then applied nearly all of that liquid onto the surface, compared to the fiber flocked brushes which still retained approximately half of the liquid rather than applying it.
- ZerofloX also had more consistent measurements for every replication due to the variable nature as to exactly how many fibers are on the fiber flocked brushes compared to the consistent shape of the ZerofloX.
- ZerofloX absorbed less overall liquid, but then applied nearly all of that liquid onto the surface, compared to the fiber flocked brushes which still retained approximately half of the liquid rather than applying it.



CONCLUSIONS

ZerofloX is more efficient by wasting less adhesive that is left on the brush after application, and a more predictable vehicle for moving adhesive from a mixing well and applying it to a surface. This would allow less adhesive required to be dispensed into a mixing well for small tooth preparations, or more precise application to multiple preparation sites.

REFERENCE

The Dental Advisor, No. 35, May 2023 ²

Fiber Applicator Shedding - In Vitro Evaluation of ZerofloX™ an Innovative Applicator Brush.

Study location: The Dental Advisor – Ann Arbor, Michigan USA
 Study period: May 2023
 Study author(s): Cowen M, Powers JM



OBJECTIVE

To measure the extent that 3 different applicator brushes shed fibers after application of a dental adhesive.

METHOD

Three different applicator brushes were coated with the dental adhesive iBond Universal (Kulzer); and then rubbed on a glass slide for 20 seconds to simulate an adhesive application in a bonding procedure

- ZerofloX™ (medmix Switzerland AG)
- Benda* Micro (Centrix)
- Microbrush®* (Young Innovations)

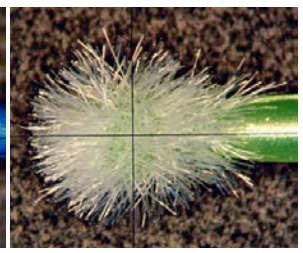
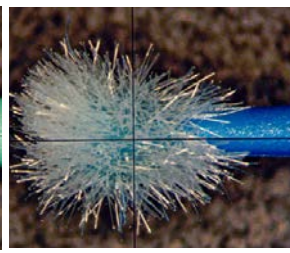
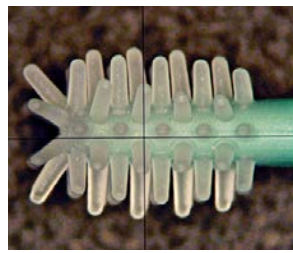
RESULTS

- On average, Microbrush shed an average of 3.5 bristles per application and the Benda Micro brush shed 4.2 bristles with a maximum of 6 bristles lost with either brush.
- The potential concern with bristles being shed onto prepared surfaces is that they can create a weak spot in the adhesive interface which may serve as the initiation site for debonding; or can be carried by the solvent toward the margins increasing the chance for microleakage or unesthetic fibers showing on the surface which may appear as a defect at the margin.

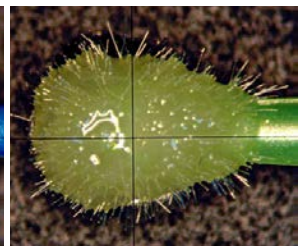
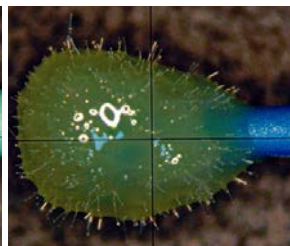
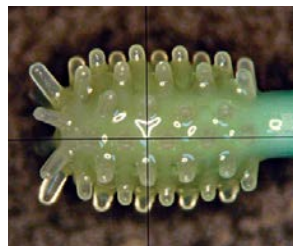
DRY



Example of bristles on microscope slide



WET



ZerofloX

Benda Micro

Microbrush

Brushes shown before and after immersion in iBond Universal

CONCLUSIONS

ZerofloX eliminated the loss of adhesively-fixed fiber flocks on the tooth preparation/surface.

Overall, this may not be a major contributing factor for restorative failure, but this is difficult to study and hasn't been assessed to our knowledge.

REFERENCE

The Dental Advisor, No. 35, May 2023 ²

*Microbrush is the trademark of Young Microbrush LLC. / Benda is the trademark of Centrix Inc

Bond Strength Performance - In Vitro Evaluation of ZerofloX™ an Innovative Applicator Brush.

Study location: The Dental Advisor – Ann Arbor, Michigan USA
 Study period: May 2023
 Study author(s): Cowen M, Powers JM



OBJECTIVE

To measure the bond strength performance when applying dental adhesive using 3 different applicator brushes.

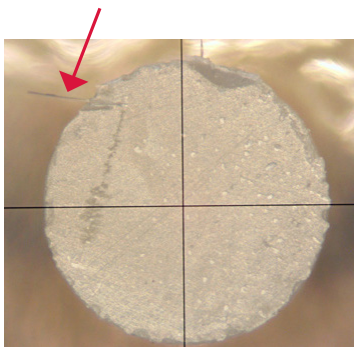
METHOD

The Ultradent shear bond strength method (ISO 29022) was used to measure the bond strength performance when applying the dental adhesive iBond Universal (Kulzer) using 3 different applicator brushes:

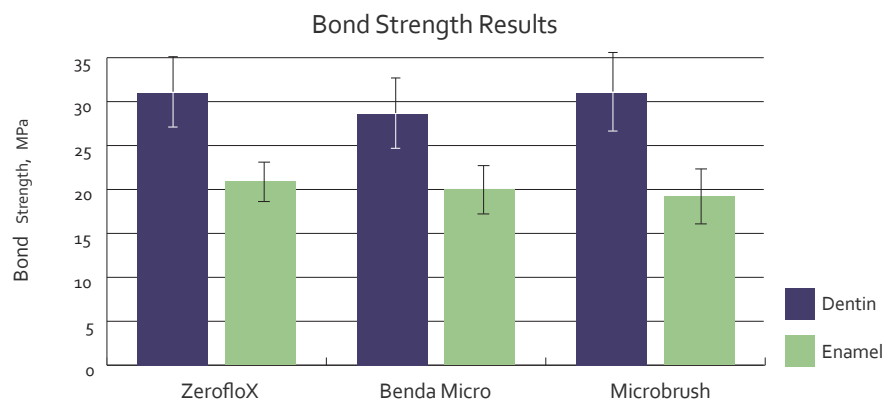
- ZerofloX™ (medmix Switzerland AG)
- Benda* Micro (Centrix)
- Microbrush®* (Young Innovations)

RESULTS

- Overall, no significant difference in the bonding performance in terms of bond strength or failure mode between the different groups was observed.
- A few fibers in the bonding interface of the test specimens for the fiber flocked applicator groups, and those specimens had a lower bond strength than the average for those groups.
- Fibers were only found in the bonding interface of 4/40 total specimens due to the large area being applied (~78.5 mm²) compared to the relatively small specimen sizes (4.5 mm²); examination of the unbonded adhesive on the surface confirmed that fibers were shed during application.



Example of a fiber found at the bonding interface



CONCLUSIONS

While the presence of the fibers did not particularly affect the overall average bond strength values due to the small sample size, it serves as proof of concept that the fiber at the interface may create a weak point in the bonding interface.

REFERENCE

The Dental Advisor, No. 35, May 2023 ²

Pit and Fissure Application - In Vitro Evaluation of ZerofloX™ an Innovative Applicator Brush.

Study location: The Dental Advisor – Ann Arbor, Michigan USA
 Study period: May 2023
 Study author(s): Cowen M, Powers JM



OBJECTIVE:

To examine the ability of 3 different applicator brushes when applying different flowable composite materials - either by means of pushing the flowable composite into the crevices or by removing excess.

METHOD:

For both test groups, the Ultradent shear bond strength method (ISO 29022) was used to evaluate the bonding interface for appearance of voids or abnormalities on dentin and enamel surfaces.

Test Group 1: Teeth were treated for sealant placement by cleaning and etching the surfaces with 37% phosphoric acid followed by placement and modification of the self-adhesive light-cured composite Fit SA (Shofu USA) using the 3 different applicator brushes.

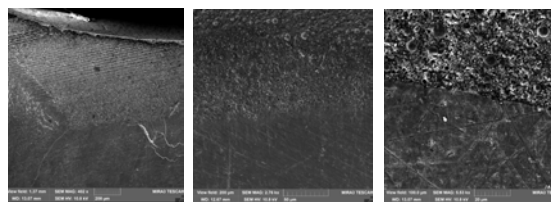
Test Group 2: Teeth were treated for surface caries by minimally preparing the teeth with a diamond bur followed by placement of 3M Scotchbond Universal Plus and 3M Filtek Supreme Flowable Restorative using the 3 different applicator brushes

- ZerofloX™ (medmix Switzerland AG)
- Benda* Micro (Centrix)
- Microbrush®* (Young Innovations)

For each test group, the margins for each specimen were sectional and examined using a Scanning Electron Microscope to observe if any defects were detected.

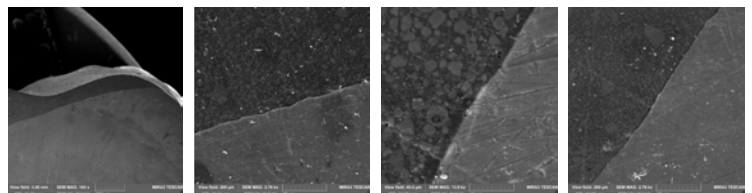
RESULTS:

Test Group 1: There was no significant differences found between the ZerofloX groups and the Microbrush group in the number of voids, or thickness of the bonding layer.



Representative examples of the margins of *Fit SA* applied with *ZerofloX*.

Test Group 2: There was no significant differences found between the ZerofloX groups and the Microbrush group in the number of voids, or thickness of the bonding layer.



Representative examples of the margins of *3M Scotchbond Universal Plus* and *3M Filtek Supreme Flowable Restorative* an applied with *ZerofloX*.

CONCLUSIONS:

Excellent marginal adaptation was achieved with use of the ZerofloX applicator with these flowable composites and adhesives.

REFERENCE:

The Dental Advisor, No. 35, May 2023 ²

New updates in primer application in adhesive and restorative dentistry.

Study location: Studio BMF – Cattolica Italy
 Study period: May 2025
 Study author(s): Fabbri G, Carloni L



ZWP ZAHNARZT
WIRTSCHAFT PRAXIS

OBJECTIVE:

To evaluate and compare the quality and effectiveness of the restorative surface at high magnification after conditioning different types of substrate materials with primer using different applicator brushes.

METHOD:

Two different primers (Primer A and B) were used to condition the surface of zirconia and lithium disilicate samples using a conventional micro applicator with fiber flocks and the ZeroFloX™ micro applicator. Both surfaces were evaluated immediately after the application of the primer at high magnification using Scanning Electron Microscopy (SEM) to compare the homogeneity and quality of material distribution as well as the absence of residue.

RESULTS:

- Significant differences were observed between the fiber-flocked micro applicator and ZeroFloX.
- ZeroFloX demonstrated an absence of lost fiber flocks due to its thermoplastic elastomer bristles which ensured for a more precise and uniform distribution of material compared to the fiber-flocked applicator which dispersed lost fiber-flocks creating undesired surface contamination.
- Clinically, the improved uniformity in distribution and absence of surface contamination could ensure better distribution of the binders on the internal surface of the restoration, optimizing the adhesive procedures.



Fig. 3 Zirconia sample treated with conventional fiber-flocked micro applicator (Primer B)



Fig. 4 Zirconia sample treated with ZeroFloX micro applicator (Primer B)



Fig. 5 Zirconia sample treated with conventional fiber-flocked micro applicator (Primer A)

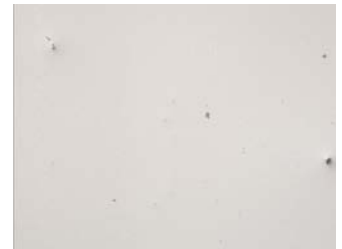


Fig. 6 Zirconia sample treated with ZeroFloX micro applicator (Primer A)

The following SEM images shown above demonstrate the difference in surface homogeneity and the presence of fiber-flocks on zirconia samples (Fig. 3, Fig. 4, Fig. 5 and Fig. 6).

CONCLUSIONS:

ZeroFloX as a significant improvement over conventional fiber-flocked micro applicators for the placement of primers or adhesives onto lithium disilicate or zirconia ceramic restorations due to its elimination of lost fiber-flock contamination as well as a more precise and efficient distribution of the material. From a clinical perspective, ZeroFloX micro applicator offers tangible advantages in terms of precision application, protocol safety, and optimization, which may be particularly useful in the most delicate adhesive procedures or in the preapplication cleaning phases of zirconia and lithium disilicate restorations.

REFERENCE:

DENTALZEITUNG No. 2, June 2025 ³

Residuals of bristles of adhesive system applicators: a microscopic analysis of three different systems.

Study location: University of Trieste – Trieste Italy
 Study period: June 2025
 Study author(s): Berton F, Zotti M, Porrelli D, Rapani A, Stacchi C, Turco G, Di Lenarda R



UNIVERSITÀ
DEGLI STUDI
DI TRIESTE



OBJECTIVE:

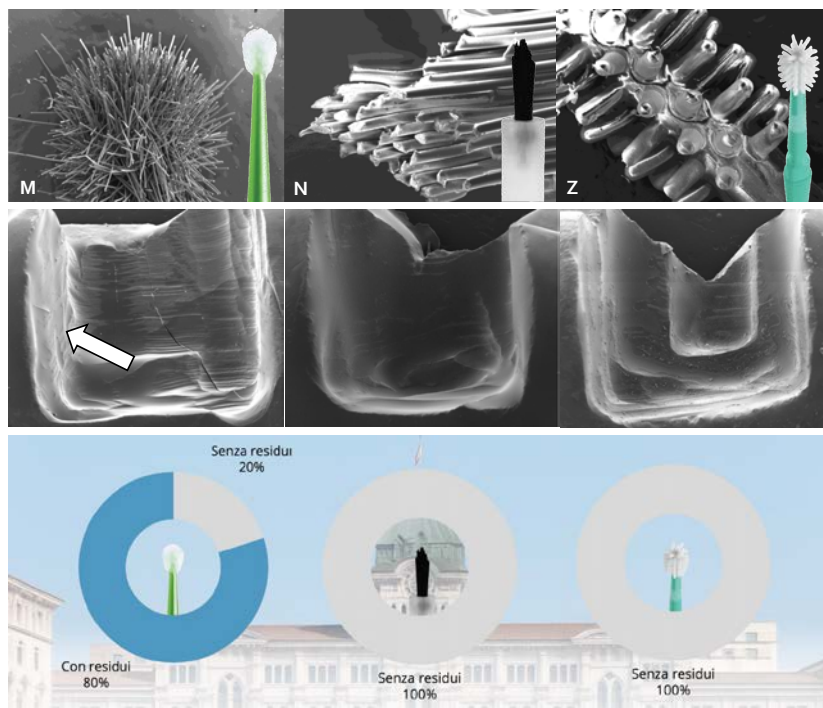
To investigate the presence of remnants coming from three different types of adhesive applicators on the enamel-dentinal surface of extracted human teeth.

METHOD:

- 45 extracted human teeth were prepared with Class II cavities following Black's classification and divided into three groups.
- For each group, a different applicator was used: Microbrush (M), ZerofloX™ (Z), or nylon disposable brush tips (N).
- All cavities were treated with a two-step self-etching system and polymerized.
- Samples were examined using scanning electron microscopy (SEM) after being mounted on aluminum stubs and coated with gold.

RESULTS:

Bristles remnants were observed in 80% (12/15) of samples in group M, while no remnants were detected in groups Z and N.



CONCLUSIONS:

The microscopic analysis revealed significant differences in bristle presence among the three applicator groups. Further studies are required to determine whether these remnants affect adhesion parameters.

Clinical Significance: Dentists should consider the possibility of remnants being left on the restorative cavity walls, especially when using microbrush applicators.

REFERENCE:

Poster Presentation. 32nd National Congress of the College of University Professors of Odontostomatological disciplines, June 2025 ⁴



Courtesy of Luis Fernando Bessel

CLINICAL PRODUCT EVALUATIONS

Clinical Product Evaluation “Dirty Little Secrets”

Dr. med. dent. A. Devigus

Study location: Dentist.CH AG – Bülach Switzerland
 Study period: April 2024
 Study author(s): Devigus A



INTRODUCING THE ZerofloX™ MICRO APPLICATOR

The introduction of the ZerofloX micro applicator from medmix Dental (Switzerland) in our dental clinic represents notable improvements regarding the way we apply different types of dental materials for a diverse range of dental treatments. Prior to this, we have predominantly used conventional flocked-type dental applicators which are commonly used in dental clinics, but can also pose some challenges.

FOCUS ON FLOCK-FREE AND EFFICIENCY

One prominent problem is their tendency to shed fiber flocking during application; thus frequently leaving fiber debris embedded in the final restoration which typically does not pose any relevant clinical issues other than possible esthetic defects. With ZerofloX, this clinical challenge is a thing of the past, since this micro applicator has been specially developed to eliminate the loss of fiber flocks and increase efficiency. Thanks to its unique design, we can also apply dental materials in a more precise manner for better results to our patients. ZerofloX is a major step forward for our practice and its contribution to improving the quality of dental care.

We are delighted with the positive changes that this innovative applicator has provided for our practice.



Clinical photo showing lost fiber flocks using a conventional flocked dental applicator. Courtesy of Prof. Fabio M. Salomão DDS, MsC, PhD, Brasil.

Clinical photo showing lost fiber flocks using a conventional flocked dental applicator. Courtesy of Prof. Fabio M. Salomão DDS, MsC, PhD, Brasil.

OPTIMIZED EFFICIENCY AND USER-FRIENDLY APPLICATION



ZerofloX's optimal absorption of the dental bonding agent materials demonstrate complete release of material during application to minimize material waste for every application. This feature also minimizes the need to recoat the applicator head with material several times, thus saving time and minimizing the risk of errors.

ZerofloX offers optimized efficiency which can be attributed to its exceptional liquid absorption capabilities as well as its user-friendly application process. These characteristics are especially beneficial in delicate clinical procedures, where accuracy and preservation of materials are of the utmost importance.

Thanks to ZerofloX's adaptable head combined with its triangular-shaped grip handle and dual-bending points, clinicians can easily maneuver around intricate shapes of teeth with an unparalleled degree of control and accuracy.

UNIVERSAL ACCESS FOR A VARIETY OF DIFFERENT INDICATIONS



ZerofloX allows for easy navigation around the shape of the tooth due to its pliable head design comprised of a soft elastomer substance and adjustable handle which can be customized according to the user's liking. This versatility guarantees that dental adhesive and other materials are applied with high precision.

Easy application of dental adhesive material in difficult-to-reach tooth surfaces using ZerofloX.

ZerofloX's thinner diameter in the anterior section allows for universal access for a variety of different indications. The inclusion of these features has greatly enhanced my ability to effortlessly and accurately access difficult-to-reach tooth surfaces, especially in the posterior and distal region. ZerofloX overcomes the challenges of conventional applicators and offers an unparalleled level of control and simplicity.

NEW STANDARD FOR QUALITY OF CARE AND EFFICIENCY IN DENTAL MATERIAL APPLICATION

The ZerofloX micro applicator has significantly revolutionized the adhesive and material application procedures in my dental practice. The enhanced mobility and precision of our dental restorations thanks to ZerofloX has significantly improved the clinical outcome, making conventional dental applicators previously utilized in our practice now appear obsolete and less effective. The ZerofloX micro applicator not only overcomes the restrictions of these outdated application devices, but it also has established a new standard for the quality of care and efficiency of dental material application, especially in adhesive dentistry. The incorporation of this technology in our dental office has revolutionized our workflow, greatly improving both the efficiency and clinical outcomes we can deliver to our patients.

REFERENCE:

Clinical Product Evaluation - Dirty Little Secrets, Apr 2024 ⁵

Clinical Product Evaluation

Dr. Prof. Fabio M. Salomao, DDS, MsC, PhD

Study location: Salomão Cunha Odontologia – Sao Paulo Brasil
 Study period: Oct-Nov 2024
 Study author(s): Salomao F



OBJECTIVE:

To evaluate the performance of the ZerofloX™ micro applicator after daily clinical use for 30 days.

METHOD:

5 dentists in Brasil reported on their clinical experience when using ZerofloX for their daily restorative and prosthetic dental procedures. Participating dentists completed a product evaluation survey with 8 questions to document their experience compared to their currently used dental applicator. Participating dentists also rated their overall satisfaction of using ZerofloX compared to their currently used dental applicator.

RESULTS:

- **Overall Satisfaction:** 94% of the participants were positively satisfied with the performance, usability, and clinical effectiveness of ZerofloX compared to their applicator.
- **Ease of Access to Cavities:** 76.4% of respondents rated ZerofloX as “extremely easy” to perform procedures with minimal difficulty.
- **Material Handling:** 95.8% of the participants rated ZerofloX’s ability to absorb, transfer, and spread material as “much better or better” compared to their applicator.
- **Universal Head Size:** 95.8% of the participants rated ZerofloX’s single diameter head size as “much better” for clinical applications compared to their applicator.
- **Durability & Reliability of Other Micro applicators:** 76.4% of respondents experienced a high frequency of bristle loss with other micro applicators.
- **Product Usage Rate:** 64.5% reduction in the number of applicator units required for ZerofloX (decrease from 200 conventional micro-applicators to only 71 applicator units for ZerofloX) underscoring the efficiency and effectiveness of ZerofloX in clinical applications.
- **Adoptions Rate:** 100% of respondents indicated a willingness to transition to using ZerofloX as their primary applicator.

Overall Consolidated Responses for ZerofloX Feedback



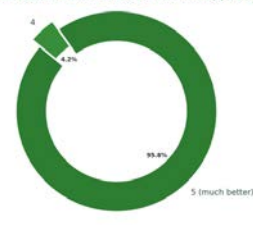
Ease of Access to Cavities



Ability to Absorb, Transfer, and Spread Material



Universal Diameter Head Size for Clinical Applications



CONCLUSIONS:

In summary, the survey results suggest that ZerofloX is highly regarded among its users, particularly in terms of ease of use, material handling, and overall satisfaction. The feedback on traditional micro applicators indicates frequent issues with bristle loss, positioning ZerofloX as a potentially more reliable alternative. Additionally, the high percentage of users willing to adopt ZerofloX as their primary applicator highlights the strong confidence in its quality and clinical utility. These insights underscore ZerofloX’s position as a trusted, effective, and adaptable applicator in the dental field, with clear advantages over conventional applicators.

REFERENCE:

Clinical Product Survey, Nov 2024 ⁶

Clinical Product Evaluation – Minimally invasive aid with a maximum range of applications

Dr. med. dent. S. Marcus Beschnidt

Study location: Beschnidt Zahnheilkunde – Baden-Baden Germany
 Study period: May-Jun 2025
 Study author(s): Beschnidt SM



ZeroFloX™: SMALL TOOL, BIG IMPACT IN ADHESIVE DENTISTRY

Minimally invasive dentistry is evolving—and the ZeroFloX Micro Applicator is leading the way. Based on a detailed clinical observation by Dr. med. dent. S. Marcus Beschnidt, a certified specialist in prosthodontics and implantology, this innovative applicator is proving to be a game-changer in both restorative and endodontic procedures.

Here are our take-aways:

PRECISION WITHOUT COMPROMISE



ZeroFloX Micro Applicator can also be used in difficult-to-reach areas, thanks to its multiple ergonomic options.

The fiber-free elastomer bristles of ZeroFloX ensure clean, controlled application of bonding agents, disinfectants, and caries detectors—even in hard-to-reach areas. No fraying, no residue, and no risk of contamination.

VERSATILITY ACROSS PROCEDURES



Due to its stable elastomer bristles, even the smallest ceramic components can be fixed into place for permanent bonding or during try-ins.

From restorative treatments like veneers and inlays to endodontic procedures such as pulp disinfection and post cementation, ZeroFloX adapts to a wide range of clinical needs—making it a true all-rounder in minimally invasive dentistry.

MATERIAL SAVING



Particularly in the proximal area or in very small cavities, bonding agents or other liquids can be applied with sufficient pressure.

ZeroFloX minimizes material waste through precise liquid absorption and delivery, reducing the need for multiple applicators. Its durable design allows for repeated use, supporting both cost-efficiency and environmental responsibility.

From applying bonding agents and caries detectors to disinfecting pulp cavities and cementing posts, ZeroFloX delivers clean, controlled, and efficient results—making it a reliable companion in everyday dental practice.

CONCLUSION:

All in all, the ZeroFloX Micro Applicator with its fiber-free elastomer bristles represents a true evolution in adhesive technology; and, thanks to its wide range of applications, has become an everyday tool companion in our practice.

REFERENCE:

DENTALZEITUNG No. 2, Sept 2025 ⁷



Courtesy of Luis Fernando Bessel

TESTIMONIALS

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With its fiber-free monobloc elastomer bristles, the ZerofloX micro applicator has the potential to become the future gold standard in adhesive esthetic dentistry.

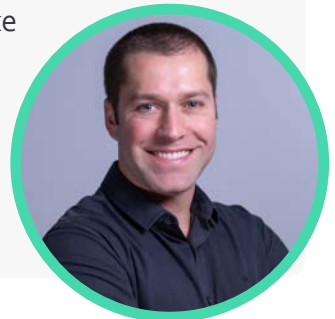
Prof. Dr. med. dent. Ivo Krejci
Switzerland



“

The ZerofloX micro applicator offers significant advantages compared to conventional flocked-type applicators due to its ergonomic brush head design, which allows for easy access and application onto just about every type of tooth surface/cavity without the loss of hairlike fiber flocking.

Prof. Fabio M. Salomão DDS, MsC, PhD
Londrina State University
Brazil



“

ZeroFloX sets itself apart from all existing micro applicators and will eventually represent a new standard for the category. During clinical use, my patients experience greater comfort when applying intraoral products. ZeroFloX provides better surface wettability and superior durability, allowing repeat use in more than one tooth or restoration, eliminating the need to use more than one micro applicator per patient. This drastically reduces the number of disposable applicators in the clinical routine.

Prof. Paulo Vinícius Soares, DDS, MS, PhD
Brazil



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The ZeroFloX Micro Applicator with its fiber-free elastomer bristles represents a true evolution in adhesive technology; and thanks to its wide range of applications have become an everyday companion in our practice.

Dr. Med. Dent. S. Marcus Beschnidt
Germany



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