

# **UNIVERSAL COMPOSITE SIMPLIFIES RESTORATION PLACEMENT AND PROVIDES COST EFFECTIVENESS**



# KEY CONSIDERATIONS PRIOR TO EMBARKING ON THE RESTORATIVE TREATMENT

Every direct restorative case is unique, and the clinician must rely on products and materials that he/she knows will perform consistently and meet the demands of the case. This is not just a matter of performing the procedure but also entails meeting the expectations of the patient and the clinician as well. Further, and just as important, are the form, function, and longevity of the restoration.

Economics is also a major consideration when determining treatment planning for restorative procedures. This holds true for both the patient and the clinician. With the rising costs of healthcare and overhead, choosing materials that are strong, esthetically pleasing, and easy to handle, while also saving time, benefits all parties involved.

The clinician must be cognizant of his/her time and the cost of performing procedures while delivering the very best treatment and meeting the expectations of the patient. Failure to do so can lead to disappointment of the patient and frustration for the clinician. After all, the clinician wants to deliver a quality restoration in the most efficient manner possible. When a patient is not satisfied with the outcome, the integrity of the clinician is compromised, and the patient then feels as though they have wasted their time and money. Further, having to redo the restoration leads to additional, non-profitable office visits.



*To optimize the workflow, a systematic approach always provides consistent outcomes.*

# THE ADVANTAGES OF DIRECT COMPOSITE PLACEMENT

With the emphasis on biomimetic dentistry, clinicians are choosing to turn to minimalistic approaches and conservative treatment to preserve as much natural tooth structure as possible. Social media has contributed to the emergence of savvier, more sophisticated patients. Many patients present to the dental office fearing that their teeth will be reduced to stumps before being properly brought back to their natural state. Therefore, it is the obligation of the clinician and staff to properly explain the treatment and workflow while understanding the expectations of the patient. Also, it is obligatory to convey and set the patient on the right mindset, if the expectations of the patient are non-achievable.

A universally shaded composite such as Venus<sup>®</sup> PURE provides a streamlined inventory for the office and reduces waste and chance of the less popular shades of composite expiring. Four shades of Venus PURE composites (Light, Medium, Dark, and Bleach) encompass all 16 classic Vita<sup>®</sup> Shades and may be used for up to 90% of all direct composite restorative demands without the use of blocker or opaque base shades.



Tooth No. 8 presenting with a class IV (mesial, incisal fracture).

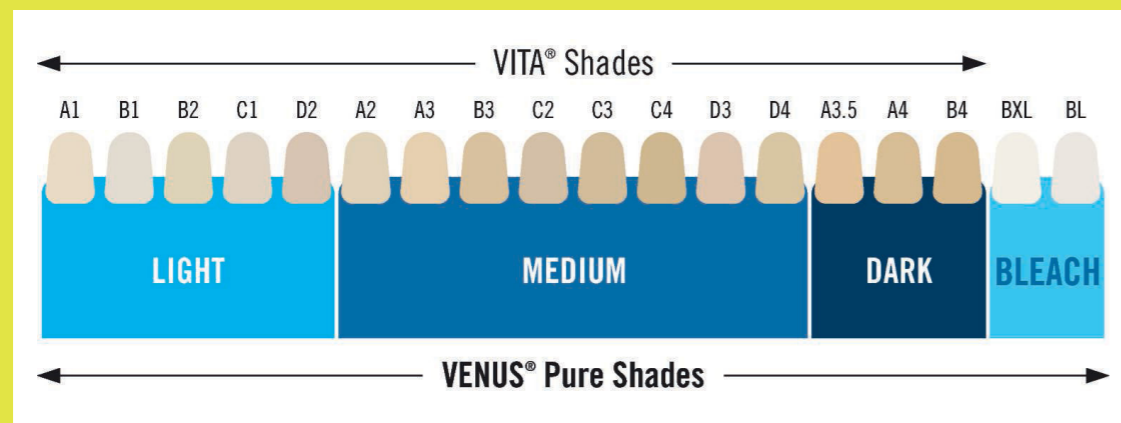


Tooth No. 8 after restoration with Venus Pearl PURE composite.

Images courtesy of Dimple Desai, DDS, Newport, CA

# KEY POINTS: DIRECT COMPOSITE TREATMENT ADVANTAGES

- The restoration is usually placed in a single appointment, making it very convenient for the patient.
- Composite restorations can be modified on the spot if, for example, an incisal edge needs to be lengthened, shortened, or if additional composite material needs to be placed or reduced to achieve optimal results.
- There are no laboratory bills for the dentist. And if modification needs to be done to the restoration, the clinician does not have to box up and send the case back to the lab for alteration. This also provides efficiencies by reducing misconstrued information and dialog between the lab tech and doctor.
- The single appointment is not just convenient for the patient, but for the clinician and office as well. Multiple appointments, such as in crown & bridge, waste chairtime and billable hours for the dentist.
- Composite restorations can be “touched up” at re-care appointments, such as repolishing, shaping, and more.



**SHADE DETERMINATION** is simplified by placing a small increment of the selected shade on the area of the tooth to be restored and light cured with no bonding agent. After shade is confirmed, the sample is merely removed with finger pressure or a plastic instrument.

# VENUS<sup>®</sup> DIAMOND AND VENUS<sup>®</sup> PEARL — DECADES OF PROVEN CLINICAL AND SCIENTIFIC SUCCESSSES AND THE SCIENCE BEHIND THIS SUCCESS

The Venus<sup>®</sup> family of nano-hybrid composites has been a mainstay in dental offices worldwide for decades.

As extensions of the Venus<sup>®</sup> Diamond and Venus<sup>®</sup> Pearl portfolio, Venus<sup>®</sup> Diamond PURE and Venus<sup>®</sup> Pearl PURE are universally shaded resin composites that exhibit outstanding physical properties surpassing those of competitive brands. This is primarily due to the unique composition that includes Kulzer's patented TCD-Urethane (Tricyclodecane-urethane) resin matrix.

The TCD advantage leads to exceptional strength, particularly in thin areas such as incisal edges, cusp tips, and cavity classes I-VI. In addition to impressive tensile, flexural, and compressive strengths, the composites are less prone to shrinkage, fracture, and cracking. They are also bis-GMA and BPA-free, making them a better choice for biocompatibility. They are ideal for pediatric use and medically compromised patients. The urethane component also increases conversion for less chances of micro-leakage, marginal breakdown, and recurrent caries. Restorations exhibit more long-term function and maintain outstanding polish and surface integrity.

Venus<sup>®</sup> PURE composites have noted a high degree of radiopacity of 325% aluminum — one of the highest recorded radiopacities of direct restorative resin composites. Finally, unlike most composites, Venus<sup>®</sup> composites are less prone to early polymerization due to ambient light from operatory windows, overhead lights, or headlamps. This feature provides ample working time for the clinician to place, sculpt, and manipulate the composite before final light polymerization with a dental curing light.



Before image of incisal chipping and wear on teeth Nos. 8 and 9.



After image of restored incisal edges using Venus Pearl PURE.

Images courtesy of Edoardo Fossati, Turin, Italy

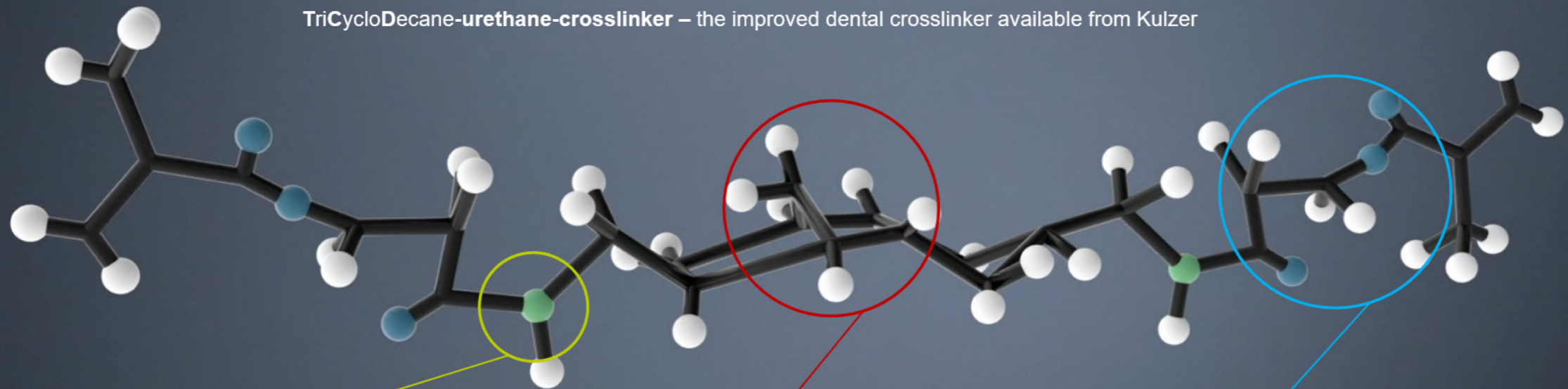
# THE SCIENCE BEHIND TCD-URETHANE



SEE HOW  
TCD-  
URETHANE  
WORKS!

Structure of TCD-urethane-crosslinker and performance benefits ...

TriCycloDecane-urethane-crosslinker – the improved dental crosslinker available from Kulzer



Urethane Structure – generation of improved crosslinker reactivity causing *increased mechanical performance and excellent biocompatibility*

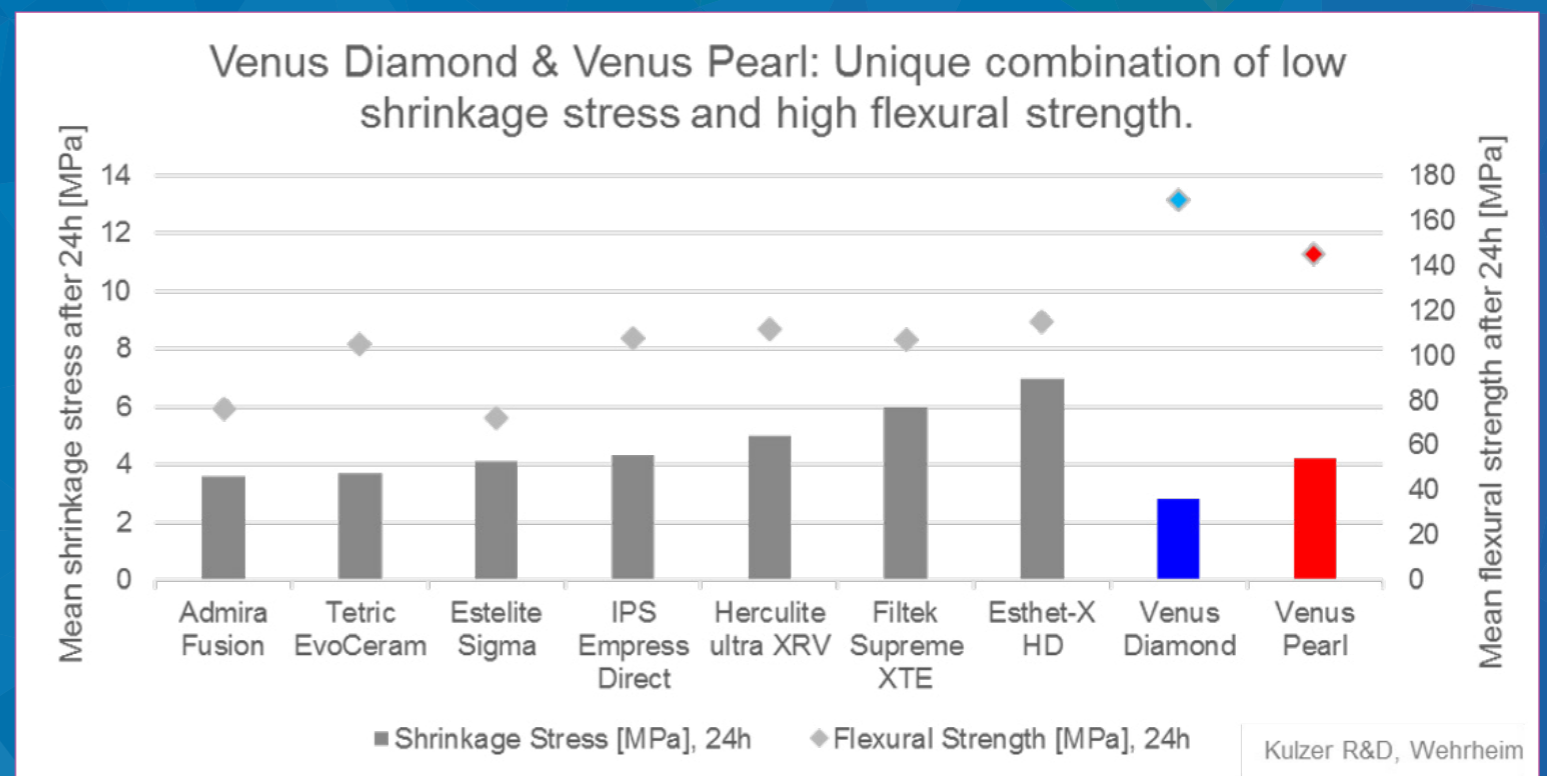
TCD - rigid core structure - prevention of vibration movement to achieve a higher packing density of molecules for *low shrinkage* behaviour

Side Chains – optimized size for improved elasticity and reduced contraction stress for *reduced marginal gap formation*

# OPTIMAL FILLER LOAD ADDS TO STRENGTH AND DURABILITY

Venus® Pearl PURE and Venus® Diamond PURE contain a barium aluminum fluoride glass filler with highly discrete nanoparticles. Venus® Pearl PURE also contains pre-polymerized fillers to allow a creamier feel and handling. Venus® Diamond PURE is constructed with the same barium aluminum fluoride filler minus the pre-polymerized fillers. Venus® Diamond PURE has a firmer consistency and handling. Both materials are ideal for all cavity classes and indications, however, it is the clinicians' preferences as to what type of consistency and handling work best in their hands. Filler sizes for Venus® Pearl PURE are 5nm-5µm and a 77% fill by weight; 59% volume Venus® Diamond PURE filler sizes are 5nm-20µm and an 82% fill by weight; 65% by volume for Venus Diamond PURE.

The TCD-Urethane in Venus® composites also allows for these highly filled rates, as the resin does not require dilution before fillers may be incorporated. Bis-GMA resins require dilution prior to filler loading, as this resin alone does not lend itself to incorporating fillers due to its very viscous consistency. A highly liquid resin, TEGDMA is used to dilute bis-GMA prior to filler loading. The state of this combination does not allow for optimal filler load. Therefore, shrinkage and water solubility are a concern long term with bis-GMA-based restoratives.



# HOW DOES VENUS<sup>®</sup> PURE WORK?

Venus<sup>®</sup> Diamond PURE and Venus<sup>®</sup> Pearl PURE provide 4 shades for use on 90% of all restorative demands in both anterior and posterior regions of the oral cavity. The shades (Light, Medium, Dark, and Bleach) encompass all 16 classic Vita<sup>®</sup> shades.

The color of natural teeth may be classified according to the Munsell Color Scheme in hue, value, and chroma. The Vita classic shade system provides 16 defined shades in A, B, C, and D ranges. However, this system covers a very limited section of the Munsell system.

Venus<sup>®</sup> PURE shades are based on hue (the color) and chroma (the saturation of a specific color). An understanding of hue, value, and chroma by the clinician will provide a deeper understanding of how Venus<sup>®</sup> PURE shades work.

The Venus<sup>®</sup> PURE shades have been optimized to match corresponding Vita shade ranges through a perfect balance of translucency, hue, and chroma in the formulation. This intentional balance of shading leads to seamless integration in a natural tooth shade even with monochromatic applications in anterior and posterior restorative cases.

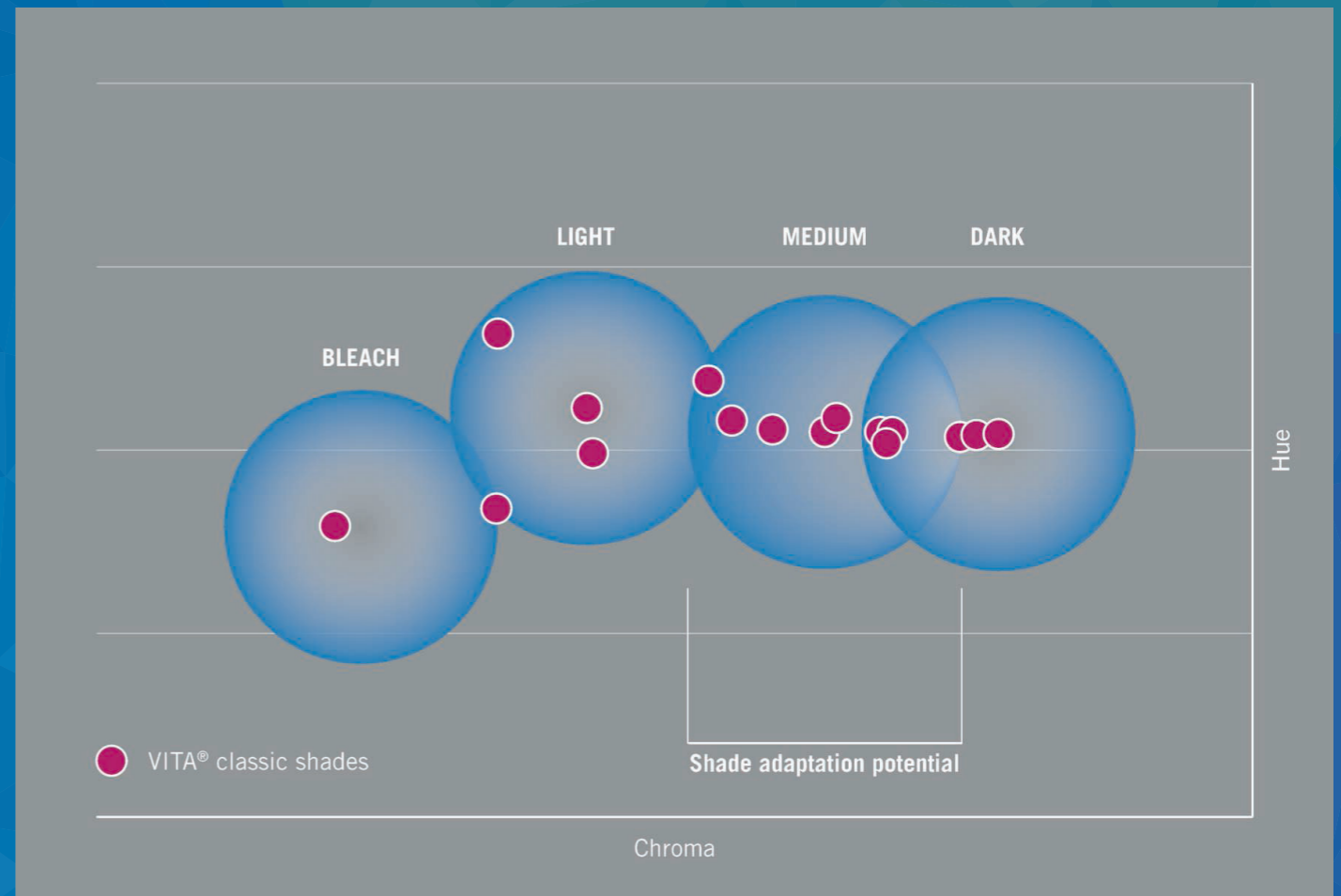


Image of the red dots represent the Vita Shades. The blue bubbles represent the Venus PURE shades and what Vita shades they correspond to.



# BALANCING CARE AND EFFICIENCY

Balancing a busy schedule, meeting patient expectations and being profitable all at the same time is challenging for clinicians. Providing a simple, cost-effective, easy and esthetic solution meets many of these demands.

Several thought leaders and dental experts weighed in on how Venus® PURE has improved their practices and gained patient confidences.



*I like to share with my colleagues simple techniques that give good results in daily practice. I believe that Venus® PURE is an easy material that achieves beautiful results.*

—Dr. Edoardo Fossati



*I perform many direct composite placements in my practice. Whether it requires monochromatic layering or multi-chromatic layering, having materials that are easy to work with, reliable, and offer a variety of applications are what I gravitate toward on a daily basis. The Venus® family of composites offers just that. In addition, my patients and I are always happy with the final results.*

—Dr. Dimple Desai

# ABOUT THE COMPANY

As one of the world's leading dental companies and part of the Mitsui Chemicals Group, Kulzer has been a reliable partner for all dental professionals for about 90 years. Whether analog or digital dentistry, aesthetic or tooth preservation, prosthetics or periodontology – as a polymer specialist and digital solution provider, Kulzer stands for trusted and innovative dental solutions. **This is us. This is Kulzer.**

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THANK YOU TO OUR SPONSOR: KULZER

## Venus® PURE Shades

Venus® PURE Nano-Hybrid composites feature 4 universal shades that offer terrific aesthetics, simplify placement, and take care of up to 90% of direct composite demands.

Click **HERE** to:

- Book a demonstration,
- Get a **FREE** sample,
- Download our Venus PURE magazine,
- Review a Venus PURE Success Story,
- AND MUCH MORE!

Learn more at [KulzerUS.com/simplicity](http://KulzerUS.com/simplicity)



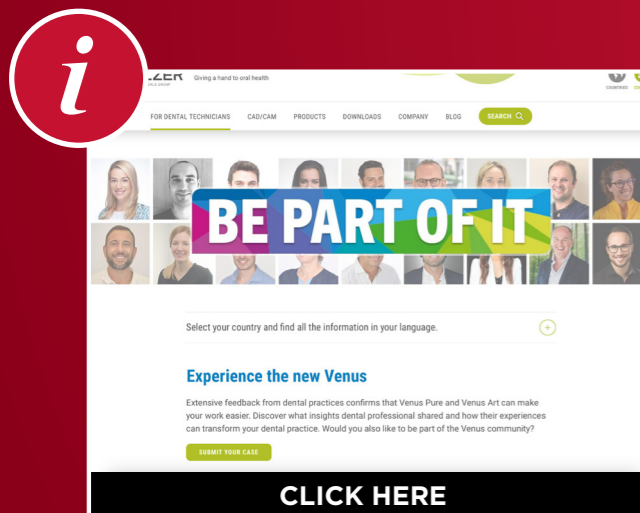
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## ADDITIONAL RESOURCES



SEE HOW DENTISTS AROUND THE  
WORLD ARE USING VENUS PURE  
TO HELP TRANSFORM  
THEIR PRACTICES!



SEE HOW KULZER'S PROPRIETARY  
ADVANCED TCD-URETHANE  
MOLECULE WORKS!



REQUEST A DEMO AND RECEIVE  
A FREE SAMPLE!