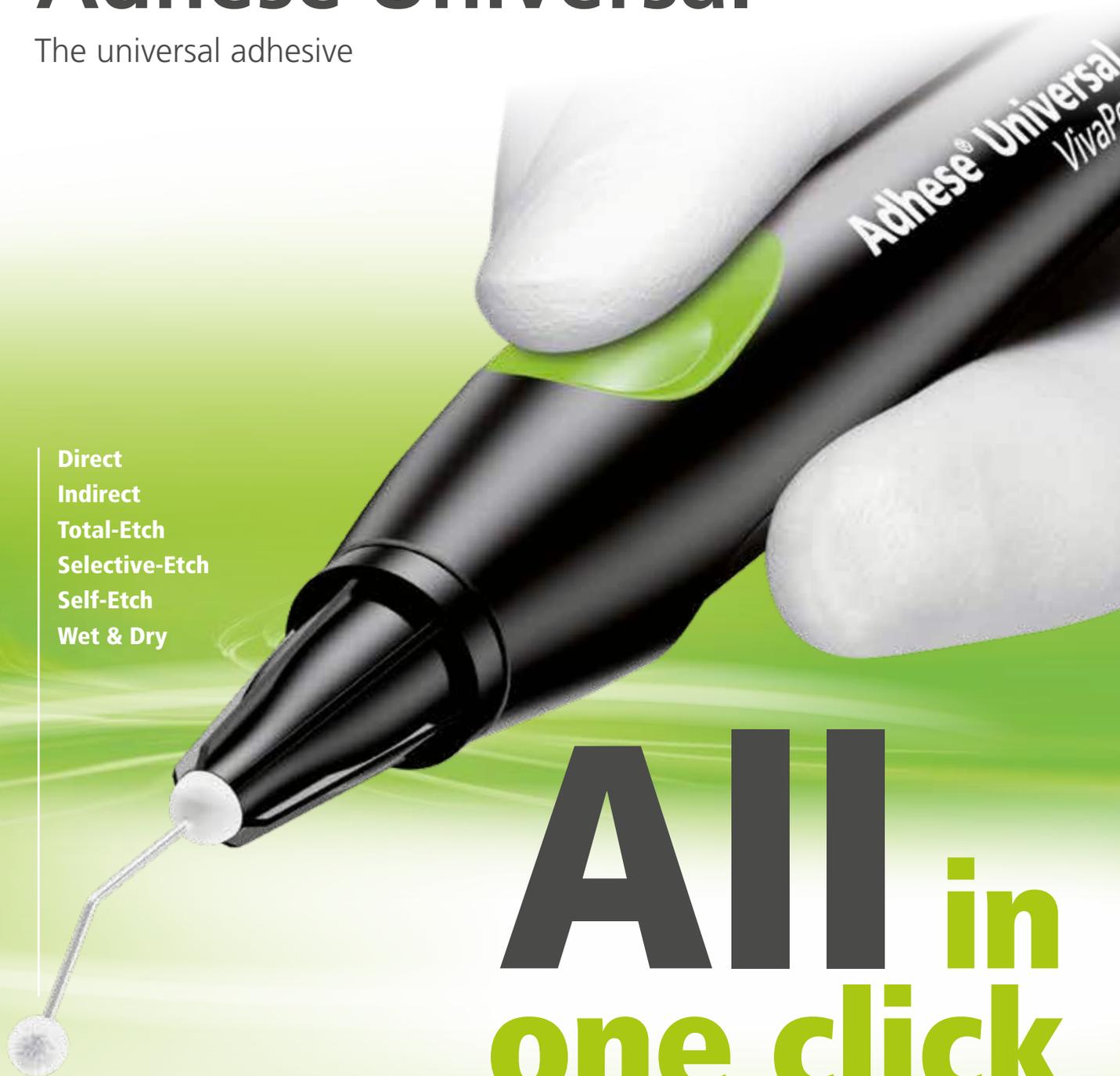


Adhese® Universal

The universal adhesive

Direct
Indirect
Total-Etch
Selective-Etch
Self-Etch
Wet & Dry

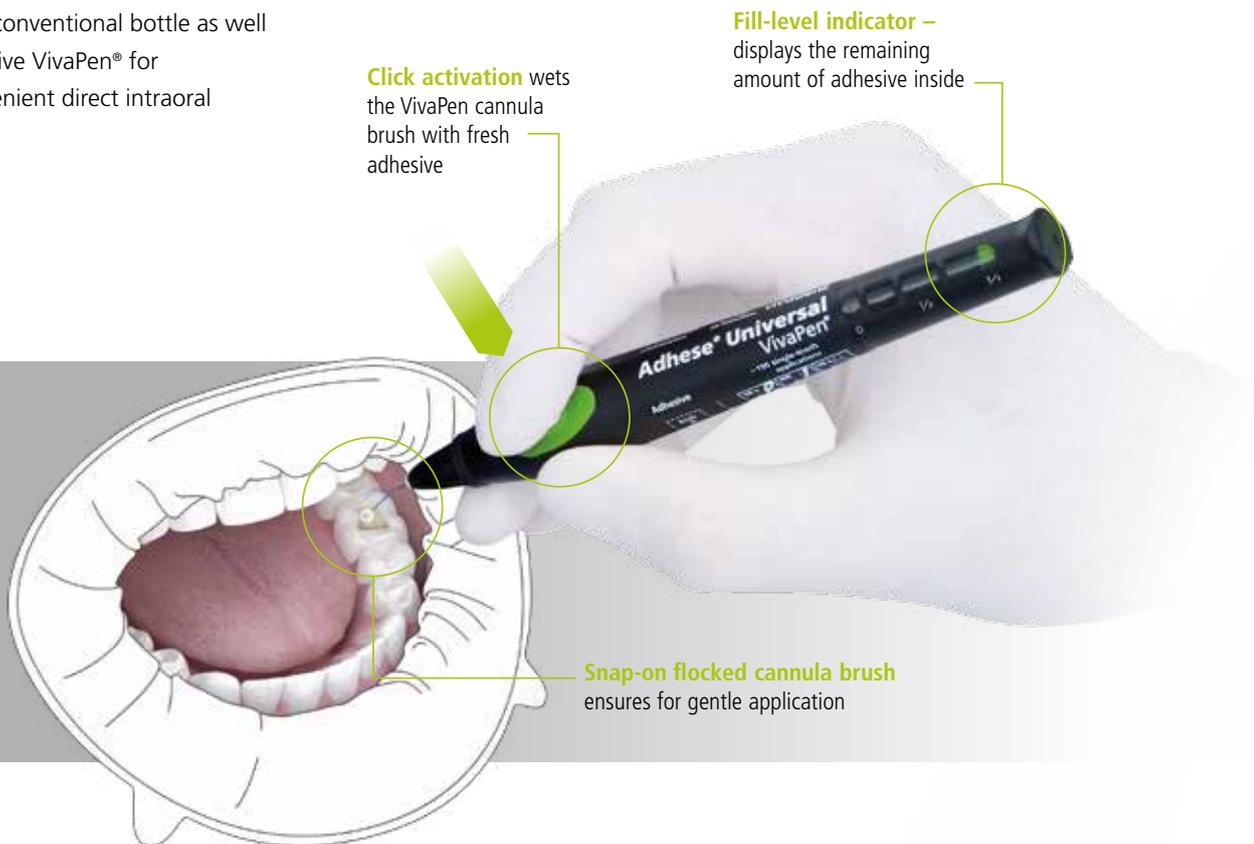


**All in
one click**

ivoclar
vivadent®
passion vision innovation

Universal Adhesion with advanced delivery

Adhese® Universal is a single-component, light-cured adhesive for **direct and indirect bonding procedures** and all etching protocols. It is the only universal bonding agent available in a conventional bottle as well as the innovative VivaPen® for fast and convenient direct intraoral application.¹



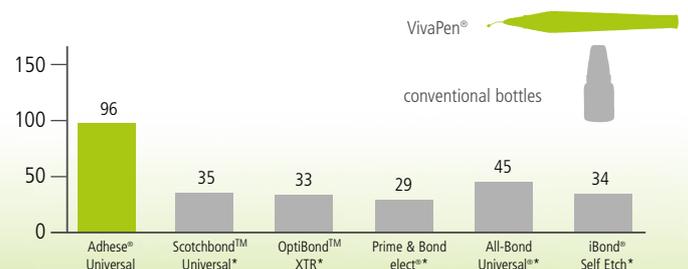
¹ Protective sleeve is required for intraoral use.

Efficient Click & Bond® dispensing with the VivaPen®

Simple “Click” activation dispenses the exact amount of material needed for each procedure. Dispensing of adhesive material into a mixing well is no longer required, which results in a significant reduction in material waste.

An independent third party evaluation comparing the efficiency, residual waste and cost-effectiveness of the VivaPen to conventional bottle delivery forms showed that 2 millilitres of adhesive in the VivaPen is sufficient enough for approximately 190 single-tooth applications.

Almost 3 times more single-tooth applications per ml



* Not registered trademarks of Ivoclar Vivadent AG.
Source: Berndt & Partner, VivaPen Benchmarking Study, August 2013

Universal Application

for direct and indirect restorations

Direct restorations

- Direct composite resin fillings
- Direct core build-ups
- Intraoral repair of fractured composite resin fillings



Indirect restorations

- Adhesive cementation of indirect restorations



- Suitable as a primer for restorations made of Tetric CAD composite blocks

Adhese Universal balances an optimized mix of hydrophilic and hydrophobic monomers with a low acidic concentration and mild etching effect into one formulation.

- **Mild acidic properties** allow compatibility with light-, self- and dual-cure composite filling materials as well as light- and dual-cure luting cements.
- **Low film thickness (approx. 10 µm)** – will not impede with the fitting accuracy of indirect restorations.
- **No activator** is required with dual-cure composites and luting cements.

ONE adhesive for ALL etching techniques

Self-etch technique



Dr R. Watzke, Ivoclar Vivadent AG, Schaan, 2014

Selective- enamel-etch technique



Dr A. Peschke, Ivoclar Vivadent AG, Schaan, 2014

Total-Etch (etch & rinse) technique



Dr A. Peschke, Ivoclar Vivadent AG, Schaan, 2013

High Technique Tolerance

High bond strength on wet and dry dentin

How wet or dry should the dentin be in order to achieve high bond strength?

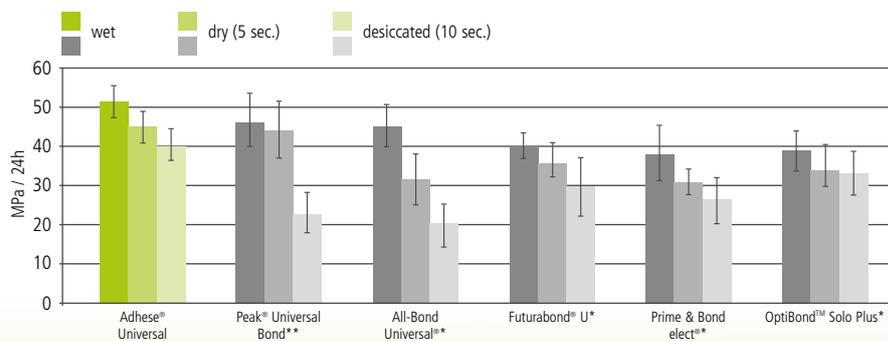
The solution:

Adhese Universal combines hydrophilic and hydrophobic properties into one formulation. It is tolerant towards moisture and penetrates well into the open dentinal tubules.

The bond strength of Adhese Universal to dentin remains uncompromised, even after etching with phosphoric acid or after over-drying or over-wetting the dentin surface. This results in reliable high bond strength on wet and dry dentin – independent of the etching and application protocol employed.



Shear bond strength on dentin after different surface treatments



* Not registered trademarks of Ivoclar Vivadent AG.
Source: Dr. S. Singhal et. al., University at Buffalo, 2014

Integrated Desensitization

Minimal risk of post-operative sensitivity

Wetting and tubule infiltration on wet or dry dentin is initiated upon contact with the hydrophilic solvents and methacrylate monomers contained in Adhese Universal. Additionally, the acidic components precipitate as insoluble calcium-ion salts in the dentin, facilitating mechanical blockage and sealing in the dentin tubules. This integrated "Desensitizing Effect" prevents movement of dentinal fluid within the tubules minimizing the risk of micro-leakage and post-operative sensitivity.

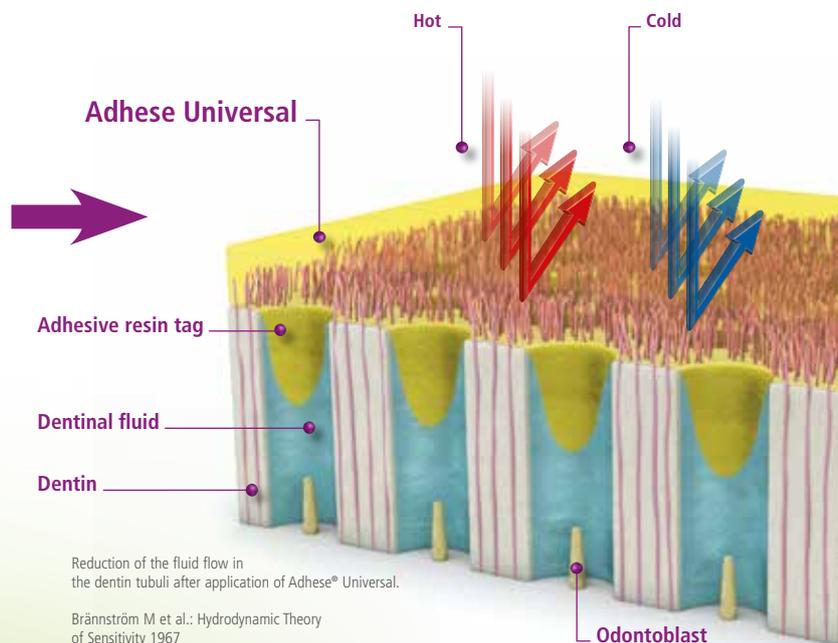
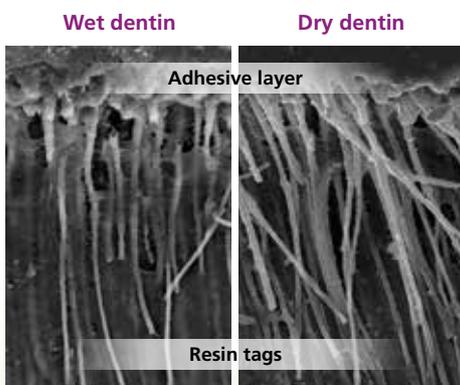


Effective mechanical blockage and sealing

Adhese Universal provides uniform mechanical blockage and sealing of the dentin tubuli under wet and dry conditions.

Integrated protection against hypersensitivity

Adhese Universal forms a reliable dentin seal via a homogenous adhesive layer with defined resin tags, which prevents the movement of fluid in the dentin as well as post-operative sensitivity associated with that movement.



SEM (x 1000) of dentin tubuli after application of Adhese® Universal using the total-etch technique under wet and dry conditions.

Lopes M., University of Lisbon, 2013

Reduction of the fluid flow in the dentin tubuli after application of Adhese® Universal.

Brännström M et al.: Hydrodynamic Theory of Sensitivity 1967

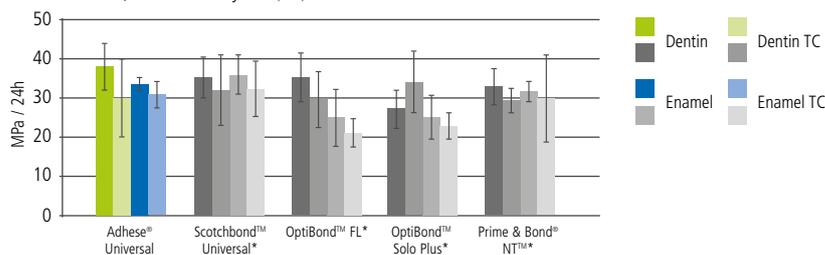
Convincing Results

Consistently high shear bond strength

Adhese Universal achieves reliable high bond strength on enamel and dentin using only one layer of adhesive – independent of the etching and application protocol employed.

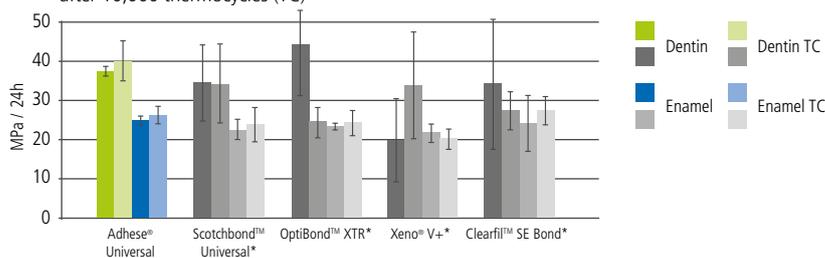
Direct bonding - Total-etch Technique¹

Shear bond strength with Tetric EvoCeram® Bulk Fill before and after 10,000 thermocycles (TC)



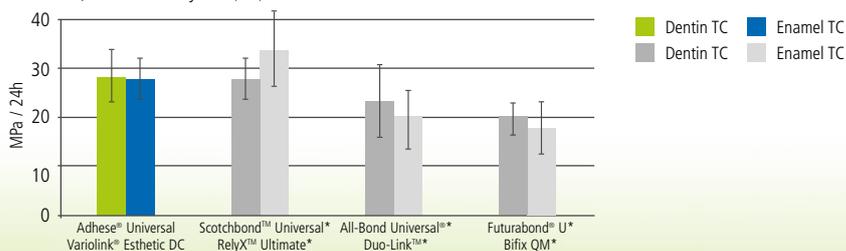
Direct bonding - Self-etch Technique¹

Shear bond strength with Tetric EvoCeram® Bulk Fill before and after 10,000 thermocycles (TC)



Indirect Bonding – Selective-Enamel-Etch Technique²

Shear bond with Variolink® Esthetic after dual-curing and 10,000 thermocycles (TC)

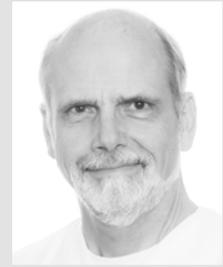


* Not registered trademarks of Ivoclar Vivadent AG.

¹ Source: R&D Ivoclar Vivadent AG, Schaan, 2014

² Source: R&D Ivoclar Vivadent AG, Schaan, 2015

” *The in-vitro test results of Adhese Universal demonstrate comparable results to multi-component Gold Standard systems. After long-term testing, universal adhesives have the potential to become the future Gold Standard in dentistry.* “



Dr med. dent. Uwe Blunck
Charité – Universitätsmedizin Berlin
Dental School, Department of
Operative and Preventive Dentistry
Berlin, Germany

Fast and easy application in only 35 seconds



Apply one coat of adhesive and scrub it into the surface for 20 seconds.
Dr S. Huth, R&D Ivoclar Vivadent AG, Schaan, 2013



Disperse the adhesive with compressed air until a glossy, immobile layer results.



Light-cure for 10 seconds.

Ordering information

- 664504WW System Kit VivaPen (1 x 2 ml)
100 VivaPen snap-on cannula brushes, 20 VivaPen protective sleeves
- 663717WW Starter Kit VivaPen (1 x 0.5 ml)
10 VivaPen snap-on cannula brushes, 20 VivaPen protective sleeves
- 665156WW Refill VivaPen (1 x 2 ml)
- 664505WW Refill VivaPen (3 x 2 ml)
- 627161 Refill VivaPen snap-on cannula brushes (300 pcs.)
- 627178 Refill VivaPen snap-on cannula brushes (100 pcs.)
- 627492 Refill VivaPen protective sleeves (300 pcs.)
- 663720WW Refill bottle (1 x 5 g)
- 663721WW Refill bottle (2 x 5 g)
- 664698 Refill Vivadent applicator brushes, green (50 pcs.)



Storage at room temperature

2°C
36°F

28°C
82°F



Direct Restoratives

Adhese® Universal forms a part of the “Direct Restoratives” product category. The products of this category cover the procedure involved in the direct restoration of teeth – from preparation to restoration care. The products are optimally coordinated with each other and enable successful processing and application.



THESE ARE FURTHER PRODUCTS OF THIS CATEGORY:

Tetric Evo-Line

One solution for all cavity classes



Natural esthetics – efficiently produced

- More than 230 million restorations placed worldwide
- Bulk-fill composites: Time savings of 47% compared to the conventional technique*
- Very good combination options

*Compared to Tetric EvoFlow® and Tetric EvoCeram®. Data available upon request.

Fluor Protector S

The protective fluoride varnish



Homogeneous protective varnish in a dispensing tube

- Immediate fluoridation of enamel
- High-yielding fluoride depot
- Mild taste

Would you like to know more about the products of the “Direct Restoratives” category? Simply get in touch with your contact person at Ivoclar Vivadent or visit www.ivoclarvivadent.com for more information.