Adhese® Universal
The universal adhesive

Click & Bond

Efficient Esthetics

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 the innovative VivaPen®.

<table>
<thead>
<tr>
<th>Universally suitable for direct and indirect bonding procedures and all etching protocols</th>
<th>Efficient VivaPen® delivery form provides almost 3 times more applications per ml compared to conventional bottles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast and convenient direct intraoral application with the ergonomic VivaPen®</td>
<td>High bond strength (&gt; 25 MPa) on wet and dry dentin</td>
</tr>
<tr>
<td>Minimal risk of postoperative sensitivity due to the integrated desensitizing effect</td>
<td></td>
</tr>
</tbody>
</table>

Fast and convenient
Universal application for direct and indirect restorations

190 single-tooth applications*

* Source: Berndt & Partner, VivaPen Benchmarking Study, August 2013
**Esthetics** are impossible without a suitable adhesive

The evolution of esthetic, tooth-coloured composite resin fillings and indirect ceramic restorations could not have taken place without the development of suitable adhesive systems.

The application of dental adhesives is considered to be one of the more complex and technique-sensitive steps in the clinical workflow. The single-component Adhese Universal with its effective formulation and simple application protocol provides a solid foundation for long-term clinical success – in addition to ensuring excellent esthetic results.

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**Esthetics**

The combination of Tetric EvoCeram® Bulk Fill and Adhese Universal provides excellent marginal integrity.

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**Functional properties of bulk-fill composite restorations after 3 years**

<table>
<thead>
<tr>
<th>% of the entire marginal length</th>
<th>Marginal fracture</th>
<th>Marginal gaps</th>
<th>Marginal staining</th>
<th>Marginal irregularities</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI 1 “Excellent/Very Good”</td>
<td>100</td>
<td>99.9</td>
<td>99.2</td>
<td>74.6</td>
</tr>
<tr>
<td>FDI 2 “Good”</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overview of the functional properties of all restorations; FDI rating 1 “Excellent/Very Good” and FDI rating 2 “Good”

Source: Peschke et al.: Clinical behaviour of bulk-fill composite restorations after 36 months, Continental European Division of the International Association for Dental Research, 21 - 23 September 2017
1. **Isolate**
   Effective isolation with OptraGate®, cotton rolls and saliva ejector.

2. **Bond**
   Direct intraoral application of Adhese® Universal with the efficient VivaPen®.

3. **Restore**
   - **Direct**
     Tetric Evo-Line – One solution for all cavity classes.
   - **Indirect**
     Esthetic restorations made of IPS e.max®, optimally cemented with Variolink Esthetic®.

4. **Cure**
   Reliable and fast curing with the Bluephase® curing units.

**Efficient Esthetics**

Products that are optimally coordinated for direct restorative procedures enhance the efficiency with which high-quality esthetic restorations can be achieved.
High bond strength on wet and dry dentin

Controlling the degree of moisture on the tooth surface can be clinically challenging, since variations in surface moisture can impact bond strength values.

Shear bond strength on dentin after different surface treatments – Total-etch technique

Consistent high 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 - Self-etch technique
Shear bond strength with Tetric EvoCeram® Bulk Fill before and after 10,000 thermocycles (TC)

Indirect bonding – Selective-enamel-etch technique
Shear bond strength with Variolink® Esthetic after dual-curing and 10,000 thermocycles (TC)
Minimal risk of postoperative sensitivity

Hypersensitivity can be one of the most challenging concerns for dentists in clinical practice. The integrated desensitizing effect in Adhese Universal minimizes the risk of postoperative sensitivity without the application of a separate desensitizing agent.

Adhese Universal provides uniform mechanical blockage and sealing of the dentin tubuli under wet and dry conditions. As a result, a homogeneous adhesive layer with defined resin tags is formed, which effectively seals the dentin.

The movement of dentinal fluid within the tubules as well as postoperative sensitivity associated with that movement are minimized.

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

Click here for the video:
www.ivoclarvivadent.com/FunctionAdheseUniversal-en
Efficient 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 compared the efficiency, residual waste and cost-effectiveness of the VivaPen to conventional bottle delivery forms. The measurements were carried out using gravimetric methods simulating daily clinical use.

Almost 3 times more single-tooth applications per ml compared to conventional bottles

Two millilitres of adhesive in the VivaPen are sufficient enough for approximately 190 single-tooth applications.

3x more applications

* not registered trademarks of Ivoclar Vivadent AG.
Source: Berndt & Partner, VivaPen Benchmarking Study, August 2013
Fast and convenient:
Direct intraoral application

The ergonomic, pen-like design of the VivaPen, in combination with the replaceable brush cannulas, ensures quick, controlled and convenient application directly in the mouth of the patient.¹
One adhesive for universal application

Adhese Universal is suitable for direct and indirect restorations.*

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

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.

* Except in cases, where sufficient exposure to curing light cannot be ensured (e.g. adhesive cementation of endodontic posts)

Dr med. dent. Uwe Blunck
Charité – Universitätsmedizin Berlin, Germany
One adhesive for all etching techniques

Adhese Universal is compatible with all etching protocols. Optimum results can be achieved in a wide range of clinical situations.

- **Freedom of choice** – The etching protocol ideally suited for the clinical situation can be chosen.
- **Reduced number of products in inventory** – replaces multiple adhesive systems

### Self-etch technique
![Self-etch technique](image)

Saves time and reduces the risk of postoperative sensitivity

### Selective enamel etching
![Selective enamel etching](image)

Enhances adhesion to enamel, provides improved marginal seal and reduces post-op interventions

### Total-etch (etch & rinse) technique
![Total-etch (etch & rinse) technique](image)

Enhances adhesion to enamel, provides improved marginal seal

### Delivery forms

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>664504WW</td>
<td>System Kit VivaPen (1 x 2 ml)</td>
</tr>
<tr>
<td></td>
<td>100 VivaPen snap-on cannulas, 20 VivaPen protective sleeves</td>
</tr>
<tr>
<td>663717WW</td>
<td>Starter Kit VivaPen (1 x 0.5 ml)</td>
</tr>
<tr>
<td></td>
<td>10 VivaPen snap-on cannulas, 20 VivaPen protective sleeves</td>
</tr>
<tr>
<td>665156WW</td>
<td>Refill VivaPen (1 x 2 ml)</td>
</tr>
<tr>
<td>664505WW</td>
<td>Refill VivaPen (3 x 2 ml)</td>
</tr>
<tr>
<td>627161</td>
<td>Refill VivaPen snap-on cannulas (300 pcs.)</td>
</tr>
<tr>
<td>627178</td>
<td>Refill VivaPen snap-on cannulas (100 pcs.)</td>
</tr>
<tr>
<td>627492</td>
<td>Refill VivaPen protective sleeves (300 pcs.)</td>
</tr>
<tr>
<td>663720WW</td>
<td>Refill bottle (1 x 5 g)</td>
</tr>
<tr>
<td>663721WW</td>
<td>Refill bottle (2 x 5 g)</td>
</tr>
<tr>
<td>695128</td>
<td>Refill Vivadent applicators, black (50 pcs)</td>
</tr>
</tbody>
</table>

Storage at room temperature

2°C / 36°F