Literature

**Admira**

<table>
<thead>
<tr>
<th>Technical data</th>
<th>Admira</th>
<th>Admira Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transverse strength (ISO 4049):</td>
<td>143 MPa</td>
<td>118 MPa</td>
</tr>
<tr>
<td>Compressive strength (analogous to ISO 9917):</td>
<td>410 MPa</td>
<td>345 MPa</td>
</tr>
<tr>
<td>flexural modulus (ISO 4049):</td>
<td>10,700 MPa</td>
<td>5,050 MPa</td>
</tr>
<tr>
<td>Abrasion</td>
<td>9 µm</td>
<td>13 µm</td>
</tr>
<tr>
<td>Adhesion to enamel and dentine with Admira-Bond:</td>
<td>27.6/25.5 MPa</td>
<td>27.6/25.5 MPa</td>
</tr>
<tr>
<td>Adhesion to enamel and dentine with Admira-Bond after thermo-cycling:</td>
<td>25.8/27.5 MPa</td>
<td>25.8/27.6 MPa</td>
</tr>
<tr>
<td>Polymerization shrinkage:</td>
<td>1.97 Vol. %</td>
<td>2.92 Vol. %</td>
</tr>
<tr>
<td>Radiopacity (ISO 4049):</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Translucency:</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>Polmatability:</td>
<td>very good</td>
<td>very good</td>
</tr>
<tr>
<td>Colourability (ISO 4049):</td>
<td>no discoloration</td>
<td>no discolouration</td>
</tr>
<tr>
<td>Sensitivity to ambient light (ISO 4049):</td>
<td>meets ISO 4049</td>
<td>meets ISO 4049</td>
</tr>
<tr>
<td>Water solubility (ISO 4049):</td>
<td>&lt; 1 µg/mm3</td>
<td>&lt; 1 µg/mm3</td>
</tr>
<tr>
<td>filler (DIN 13922):</td>
<td>77.0 w/w %</td>
<td>63.0 w/w %</td>
</tr>
</tbody>
</table>

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**Creative in research**

**Natural. Biocompatible. Ormocer®-based.**

The proven Ormocer®

based restorative system for excellent aesthetics
The Admira restorative system is the result of successful Ormocer® research. Introduced in 1999, the world’s first Ormocer® restorative system today stands for the advantages of a superior technology combined with several years of clinical success and a multitude of scientific studies. Ormocer®s consist of large pre-polymerized molecules and form a matrix of inorganic-organic co-polymers. In contrast, conventional composites are based on a purely organic resin matrix.

With their special network structure and their cross-linking capabilities the Ormocer®s provide excellent biocompatibility. The rigid Ormocer® co-polymer molecules also result in specifically low shrinkage.

**Advantages of Admira and Admira Bond**

The **Admira restorative system** is the result of successful Ormocer® research. Introduced in 1999, the world’s first Ormocer® restorative system today stands for the advantages of a superior technology combined with several years of clinical success and a multitude of scientific studies. Ormocer®s consist of large pre-polymerized molecules and form a matrix of inorganic-organic co-polymers. In contrast, conventional composites are based on a purely organic resin matrix.

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**The advantages of the Admira restorative system at a glance:**

- excellent aesthetics
- outstanding biocompatibility
- proven for years
- balanced system – ideal for all classes of fillings
- the Ormocer®-based Admira Bond: biocompatibility and permanent marginal tightness
- lower polymerization shrinkage than conventional composites
- packable, abrasion-resistant and stable colours
- tooth-like thermal expansion behaviour

*Ormocer is a registered trademark of Fraunhofer Institute, Würzburg.*
**Admira Bond S**ingle**D**ose:
The universal Ormocer®-based bond for all light-curing restoratives

**Admira Bond S**ingle**D**ose advantages:
- Ormocer®-based: excellent biocompatibility directly on dentine
- special adhesive Ormocer® for high adhesion
- 1 component – 1 layer
- elastic properties
- quick, easy, hygienic
- no spilling, no dripping
- no separate devices required

Admira Bond is also available in bottles.

Add convenience to your daily practice!

The application:

High and stable adhesion:

Simply pierce open **S**ingle**D**ose with a **Micro Tim**, take up bond, apply to etched enamel/dentine, let act, disperse with the airblower, light-cure, and then apply the restorative.

High and stable adhesion of the restorative to hard dental tissue is essential for gap-free restoration. Studies of adhesion to dentine and enamel prove the outstanding adhesive properties of the universal dentine/enamel bond **Admira Bond**.

Bonding has never been easier!

**Admira system**
The inner values of perfect fillings

**Biocompatibility**

The cross-linking and chemical structure of the Ormocer® effectively contribute to the fact that the **Admira system** is significantly more biocompatible than conventional composites.

**Polymerization shrinkage**

With the Ormocer® technology **Admira** reaches a shrinkage value of only 1.97% vol. Thus, **Admira** fillings have lower inner material tensions. Together with the high adhesion established by **Admira Bond** this results in excellent marginal tightness for long-term durable restorations.

**Marginal integrity**

**Aesthetics**

Toothlike translucency, very high colour stability and a chameleon effect allow to restore teeth to their natural beauty. **Admira**’s shade range offers translucent, opaque and bleaching shades for all clinical cases. **Admira Flow** shades exactly match those of **Admira**. Shade guides are made from original light-cured material for precise shade selection and high patient acceptance.

**Admira/Admira Flow + Admira Bond** are a universal restorative system for all classes of fillings. Even class II and class V cavities can be restored with perfect marginal tightness. Perfectly tight margins prevent infiltration of bacteria and thus the formation of secondary caries.

**Admira**’s shade range offers translucent, opaque and bleaching shades for all clinical cases. **Admira Flow** shades exactly match those of **Admira**. Shade guides are made from original light-cured material for precise shade selection and high patient acceptance.
Admira is universal

**Indications:**
- Restoring all anterior and posterior cavities
- Build-up of corners and incisal edges
- Reconstruction of traumatologically affected areas
- Veneering of discoloured anterior teeth
- Correction of shape and shade for better aesthetic appearance
- Repair of porcelain and composite veneers
- Composite inlays

**Clinical study**

- SEM picture of an Admira/Admira Bond restoration after 12 months. Gap-free interface of the restoration (A) to the enamel (S).
- SEM picture of an Admira/Admira Bond restoration after 12 months. Interface of Admira Bond application: Hybrid zone (HZ) between the filling (A) and the collagen fibres (KF) of dentine (D).

“Admira is a suitable restorative system for the treatment of carious and non-carious cervical hard dental tissue defects. The excellent polishability of the surfaces of the restorations and the perfect volumetric behaviour have to be emphasized, since accumulation of plaque has to be prevented especially in the cervical area.”

Source: C. Henning et al., DZZ 57 (2002) 8

**Daily clinical use**

- Case 1:
  - Initial situation
  - Restoration with Admira
- Case 2:
  - Initial situation
  - Admira restoration after 1 year

**Advantages at a glance:**
- Time-saving application
- Optimal flowability: no dripping from the cavity
- Excellent wetting: ideal for irregular cavity floors
- High elasticity: as a stress-absorbing lining
- Natural translucency and precise shade match: for aesthetic restoration combined with Admira
- Narrow long tip for direct application
- Biocompatible and low-shrinking
- Admira Bond and Admira Flow: the perfect lining solution under any restorative

**Admira Flow:**

**Indications:**
- Fillings of class III to V including V-shaped defects and cervical erosions
- Fillings with minimally invasive preparation technique
- Fillings of small cavities and extended fissure sealing
- To block out undercuts
- For lining or coating of cavity walls
- Repair of fillings and veneers
- Luting of translucent prosthetic pieces (e.g. porcelain-only crowns, veneers etc.)

**Admira Flow: ideal as a lining and in CBF*-technique.**

- What your colleagues liked:
  - Very good flowability, supported by thixotropic properties
  - Specifically long metal cannulae, bendable, for precise application
  - Universal use, especially as an elastic lining: stress-absorbing, re-inforces the bonding layer

CBF*-technique (composite bonded to Flow):

Flow materials, especially Admira Flow, are easy to apply. Elastic and adapt easily to clarify edges. In fillings restored with CBF*-technique the flowable liner is adapted as it is the outer layer.