**Literature**

**Admira**

**Technical data**

<table>
<thead>
<tr>
<th></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>12 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 / 27.6 MPa</td>
<td>25.8 / 27.6 MPa</td>
</tr>
<tr>
<td>Polynomial shrinkage</td>
<td>1.97 Vol. %</td>
<td>2.92 Vol. %</td>
</tr>
<tr>
<td>Radiopacity (ISO 4049)</td>
<td>220 % Al</td>
<td>200 % Al</td>
</tr>
<tr>
<td>Translucency</td>
<td>high</td>
<td>high</td>
</tr>
<tr>
<td>Polishability</td>
<td>very good</td>
<td>very good</td>
</tr>
<tr>
<td>Colour stability (ISO 4049)</td>
<td>no discoloration</td>
<td>no discoloration</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/mm²</td>
<td>&lt; 1 µg/mm²</td>
</tr>
<tr>
<td>filler (DIN 13922)</td>
<td>77.0 w/w %</td>
<td>63.0 w/w %</td>
</tr>
</tbody>
</table>

**Available from:**

VC 84 00 2420 GB 108

**Hass, K. H., Wolter, H.,**

Synthesis, properties and applications of inorganic-organic copolymers (ORMOCER®); Current Opinion in Solid State and Materials Science 4 (1999), 571-580.

**Wolter, H., Storch, W., Schreiber, S., Gnaumann, V., Leyhausen, G., Hafelt, R.**


**Wolter, H.**


**Wolter, H. and Storch, W.**


**Blunck, U.**

Effect of one-year water storage on the effectiveness of dentin adhesives in Class V composite resin restorations; Universitätssstiftung Charité Berlin; J. Dent. Res. 81 (IADR Abstracts), 946 (2002).

**Hennig, A. C., Hennig, E. R., Klemm, H. V., Hahle, E., Richter, G.,**


**Hoffert, J., García-Godoy, F., Hickel, R.**


**Firla, M. and Wolter, H.**


**Hoffert, J.**

Seitenzahnrestauration mit einem Ormocer®- Füllungsmaterial; DZZ 55 (2002), 524-529.

**Hoffert, J.**


**Haller, B.**


**Firla, M.**


**Hoffert, J. et al.**

Randabschlussqualität von Ormocer®- und Kompositfüllungen in Klasse-II-Kavitäten nach künstlicher Alterung; DZZ 55 (2) (1999), 89.

**Hoffert, J.**

Füllungswerkstoffe mit Ormocer®-Matrix, DGZ-Literaturumschau 23.

**Soltész, U.**

Schrumpfungsuntersuchungen: ZM 89 (7), (1999), 58.
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.

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.

The innovation: three-dimensionally linked inorganic-organic co-polymers

Art. No. 2420
Set 7 x 4 g syringes [A2, A3, A3.5, B2, B3, C2, OA2], 5 ml Vococid gel, 4 ml Admira Bond, shade guide, accessories

Art. No. 2419
Set II 7 x 4 syringes [3 x A2, 3 x A3, 1 x A3.5], 5 ml Vococid gel, 4 ml Admira Bond, shade guide, accessories

Art. No. 2431
Triset 3 x 4 g [A2, A3, A3.5], 5 ml Vococid gel, 4 ml Admira Bond, shade guide, accessories

Art. No. 2423-2430
Refills 4 g syringes in the shades
A1, A2, A3, A3.5, A4, B2, B3, C2, I, OA2

Art. No. 2437
4 g syringes in the shade BL

Art. No. 2451-2459
Refills 25 x 0.25 g in the shades
A1, A2, A3, A3.5, A4, B2, B3, C2, OA2

Art. No. 2439
Admira shade guide

Art. No. 2481
Triset 3 x 1.8 g syringes [A2, A3, A3.5], 5 ml Vococid gel, 2 ml Admira Bond, shade guide, accessories

Art. No. 2482-2484
Refills 2 x 1.8 g syringes in the shades
A1, A2, A3, A3.5

Art. No. 2486
Admira Flow Caps

Art. No. 2491-2494
Refills each 25 x 0.25 g in the shades
A1, A2, A3, A3.5

Art. No. 2479
bottle 4 ml

Art. No. 2432
bottle 8 ml

Art. No. 2475
Set 50 Supr Note, 5 ml Vococid gel, accessories

Art. No. 2476
200 Supr Note, accessories

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

**Admira Bond SingleDose 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:**
1. Simply pierce open SingleDose 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.
2. 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.

**High and stable adhesion:**

**Marginal integrity**

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.

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

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.

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.

**Bonding has never been easier!**

The picture shows a tooth restored with Admira after mechanical stress. The margins are perfectly tight despite extreme load.
Case 1:
- 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

Case 2:
- 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 is universal
- 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.)

Indications:
- Restoration of all anterior and posterior cavities
- Build-up of corners and incisal edges
- Reconstruction of traumatically affected anteriors
- Ven needing of discoloured anteriors
- 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-cari ous 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

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

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.)

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.)

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)

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, reinforces the bonding layer

Daily clinical use
Case 1:
- Initial situation
- Restoration with Admira
- Admira restoration after 1 year

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

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

CBF*-technique (composite bonded to Flow):
Flow materials, especially Admira Flow, are easy to apply, elastic and adapt easily to cavity walls. In fillings treated with CBF*-technique the flowable liner is extended also to the enamel area.