

Literature

Admira

Technical data	Admira	Admira Flow
Transverse strength (ISO 4049):	143 MPa	118 MPa
Compressive strength (analogous to ISO 9917):	410 MPa	345 MPa
flexural modulus (ISO 4049):	10,700 MPa	5,050 MPa
Abrasion:	9 µm	12 µm
Adhesion to enamel and dentine with Admira-Bond:	27.6 / 25.5 MPa	27.6 / 25.5 MPa
Adhesion to enamel and dentine with Admira-Bond after thermo-cycling:	25.8 / 27.6 MPa	25.8 / 27.6 MPa
Polymerization shrinkage:	1.97 Vol. %	2.92 Vol. %
Radiopacity (ISO 4049):	220 % Al	200 % Al
Translucency:	high	high
Polishability:	very good	very good
Colour stability (ISO 4049):	no discolouration	no discolouration
Sensitivity to ambient light (ISO 4049):	meets ISO 4049	meets ISO 4049
Water solubility (ISO 4049):	< 1 µg/mm ³	< 1 µg/mm ³
filler (DIN 13922):	77.0 w/w %	63.0 w/w %

Haas, K. H., Wolter, H.:

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

Wolter, H., Storch, W., Schmitzer, S., Geurtsen, W., Leyhausen, G., Maletz, R.: Neue biokompatible Dentalwerkstoffe auf ORMOCER®-Basis, Werkstoffwoche 1998, München 12.-15.10.98, Symposium 4 "Werkstoffe für die Medizintechnik"; Band IV, Werkstoffe für die Medizintechnik, Wiley-VCH, Weinheim (1999), 245-248.

Wolter, H.:

Kompakte ORMOCER® und ORMOCER®-Komposite, Fraunhofer Institut für Silicattforschung (ISC), Tätigkeitsbericht (1995), 56-63.

Wolter, H. and Storch, W.:

Dental Filling Materials (Posterior Composites) Based On Inorganic/Organic Copolymers (ORMOCER®s), 35th IUPAC International Symposium on Macromolecules (MACROAKRON 94), Akron, Ohio; Proc. (1994), 509.

Wolter, H. and Storch, W.:

New Inorganic/Organic Copolymers (ORMOCER®s) For Dental Application, Mat. Res. Soc. Symp., San Francisco April 1994; Mat. Res. Soc. Symp. Proc. 346 (1994), 143-149.

Wolter, H., Glaubitt, W. and Rose, K.:

Multifunctional (meth)acrylate alkoxy-silanes - A new type of reactive compounds, Mat. Res. Soc. Symp. San Francisco April 1992; Mat. Res. Soc. Symp. Proc. 271 (1992), 719-724.

Blunck, U.:

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

Hennig, A. C., Helbig, E. B., Klimm, H. W., Haufe, E., Richter, G.:

Klinische Studie mit einem Ormocer® (Admira) in Klasse-V-Mischkavitäten; DZZ 57 (2002), 462-468.

Manhart, J., Garcia-Godoy, F., Hickel, R.:

Direct posterior restorations: clinical results and new developments; Dent Clin N Am 46 (2002), 303-339.

Firla, M. und Wolter, H.:

Füllungssystem Admira-Beurteilung nach 2 Jahren erfolgreichem Einsatz in der Praxis; Dental Spiegel 21 (2001), 38-40.

Manhart, J.:

Seitenzahnrestauration mit einem Ormocer®. Eine Fallpräsentation. ZMK 17 (2001), 524-529.

Manhart, J.:

Plastische Werkstoffe, ZWP 2 (2001), 70 -72.

Frankenberger, R.:

Adhesive Performance of Recent Ormocer®s and Compomers; Universität Nürnberg-Erlangen, Poliklinik für Zahnerhaltung und Parodontologie; J Dent Res 79 (ADR Abstracts), 197 (2000).

Haller, B.:

In-vitro-Evaluation der Randschlußqualität des Restaurationssystems Admira/ Admira Bond in Klasse-II-Kavitäten; Universität Ulm, DZZ 55 (5), (2000), 331.

Firla, M.:

Admira - ein neues Füllungsmaterial-System auf Ormocer®-Basis, Dental Spiegel 8 (1999), 48-50.

Manhart, J. et al.:

Randqualität von Ormocer®- und Kompositgefüllungen in Klasse-II-Kavitäten nach künstlicher Alterung; DZZ 54 (2) (1999), 89.

Manhart, J.:

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

Soltész, U.:

Fraunhofer Institut Freiburg, Schrumpfunguntersuchungen; ZM 89 (7), (1999), 58.



CLINICALLY PROVEN FOR MANY YEARS



Natural. Biocompatible. Ormocer®-based.

Admira

The proven Ormocer® based restorative system for excellent aesthetics



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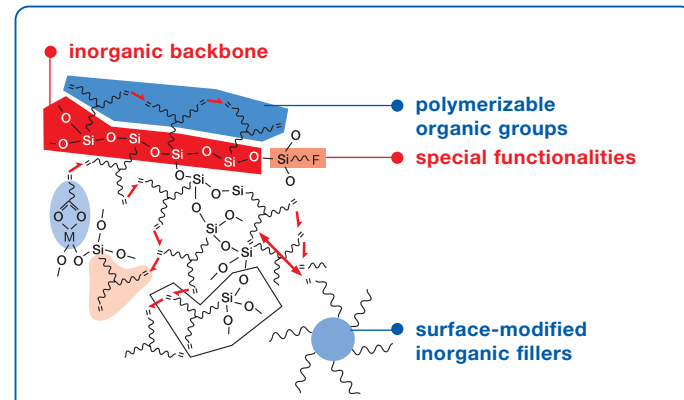
creative in research

The team for perfect fillings.

The Ormocer®-based Admira and Admira Bond.

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.



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

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 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.

Presentaciones

Admira

- 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, Admira Bond, accessories
- Art. No. 2431 Triset 3 x 4 g (A2, A3, A3.5), 5 ml Vococid gel, 4 ml Admira Bond, accessories

- Art. No. 2421-2430

Refills 4 g syringes in the shades

A1	A2	A3	A3.5	A4	B2	B3	C2	I	OA2
2421	2422	2423	2424	2425	2426	2427	2428	2429	2430

- Art. No. 2437

4 g syringe in the shade BL

Admira Caps

- Art. No. 2450 Admira Caps Set 40 x 0.25 g Caps (10 x A3, 10x A3.5, 5 x A2, 5 x B2, 5 x B3, 5 x C2), 4 ml Admira Bond, shade guide, accessories

- Art. No. 2451-2460

Refills 25 x 0.25 g in the shades

A1	A2	A3	A3.5	A4	B2	B3	C2	I	OA2
2451	2452	2453	2454	2458	2455	2456	2457	2460	2459

- Art. No. 2465

Refill 25 x 0.25 g in the shade BL

- Art. No. 2439

Admira shade guide

Admira Flow

- 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

A2	A3	A3.5
2482	2483	2484

- Art. No. 2486-2488

Refills 2 x 1.8 g syringes in the shades

A1	A4	OA3.5
2486	2487	2488

Admira Flow Caps

- Art. No. 2491-2496

Refills each 25 x 0.25 g in the shades

A1	A2	A3	A3.5	A4	OA3.5
2491	2492	2493	2494	2495	2496

Admira Bond

- Art. No. 2479

bottle 4 ml

- Art. No. 2432

bottle 8 ml

Admira Bond SingleDose

- Art. No. 2475

Set 50 SingleDose, 5 ml Vococid gel, accessories

- Art. No. 2476

200 SingleDose, accessories



Admira Bond SingleDose:

The universal Ormocer®-based bond for all light-curing restoratives

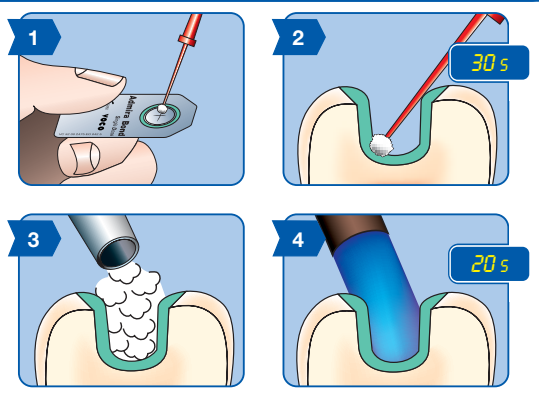
Admira Bond SingleDose advantages:

- 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!

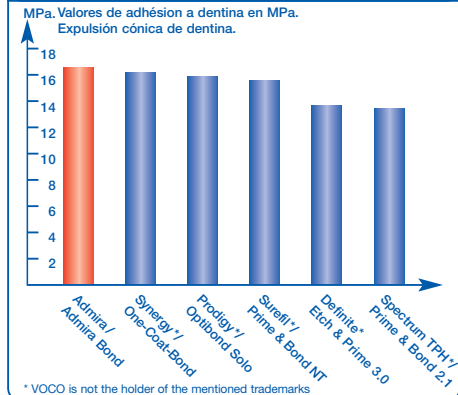
The application:



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.



High and stable adhesion:



Fuente: Dr. R. Frankenberger, Universidad de Nürnberg-Erlangen, J. Dent. Res. 79 (2000) 197. Data on file.

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**.

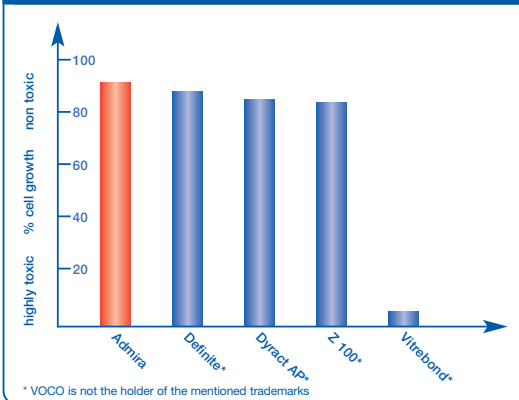


Bonding has never been easier!

Admira system

The inner values of perfect fillings

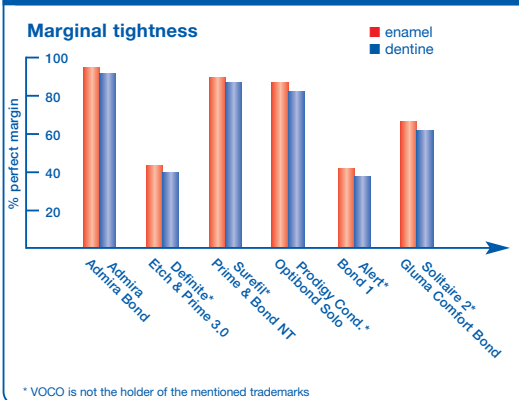
Biocompatibility



Source: G. Layhausen, Medical University Hannover, 2000

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.

Marginal integrity



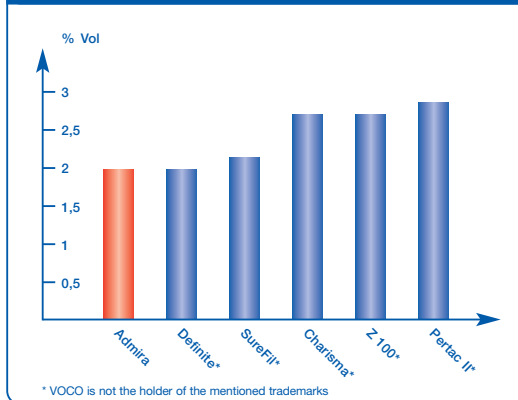
Source: H.P.Plesas, University of Munich, J.Dent.Res. 80 (2001), 250.

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.



*Source: Prof. Reinhardt, University of Münster, 1999

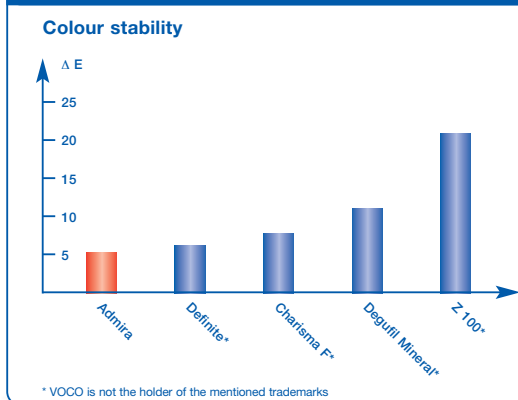
Polymerization shrinkage



Source: D.C.Watts, University of Manchester, 1999

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.

Aesthetics



Source: VOCO GmbH in-house test: colour deviation Δ E after storage in coffee, acc. to DIN 6174, 2002

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 is universal

Restore anteriors and posteriors

Indications:

- restoration of all anterior and posterior cavities
- build-up of corners and incisal edges
- reconstruction of traumatically affected anteriors
- veneering 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)

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

“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

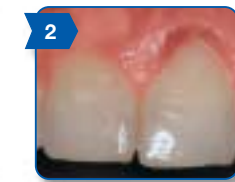


Restoration with Admira

Case 2:**



Initial situation



Admira restoration after 1 year

* Source: J. Manhart, 2001

** Source: C. Henning et al., DZZ 57 (2002) 8; Klinische Studie mit einem Ormocer® (Admira) in Klasse-V-Mischkavitäten, Ergebnisse eines Jahres.



Admira Flow:

The No.1 of flowable Ormocer® restoratives.

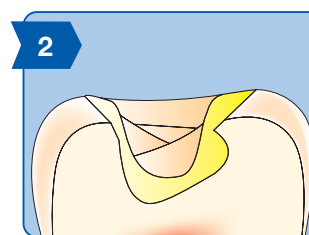
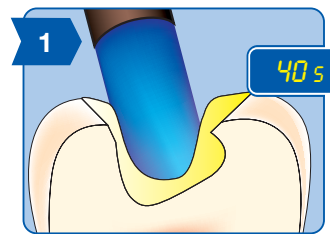
Indications:

- 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.)

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: 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 cavity walls. In fillings restored with CBF-technique the flowable liner is extended also to the enamel area.

