

# Admira Fusion

# Admira Fusion x-tra

**NANOHYBRID ORMOCER® RESTORATIVE MATERIALS**



# Admira® Fusion

## PURELY CERAMIC-BASED

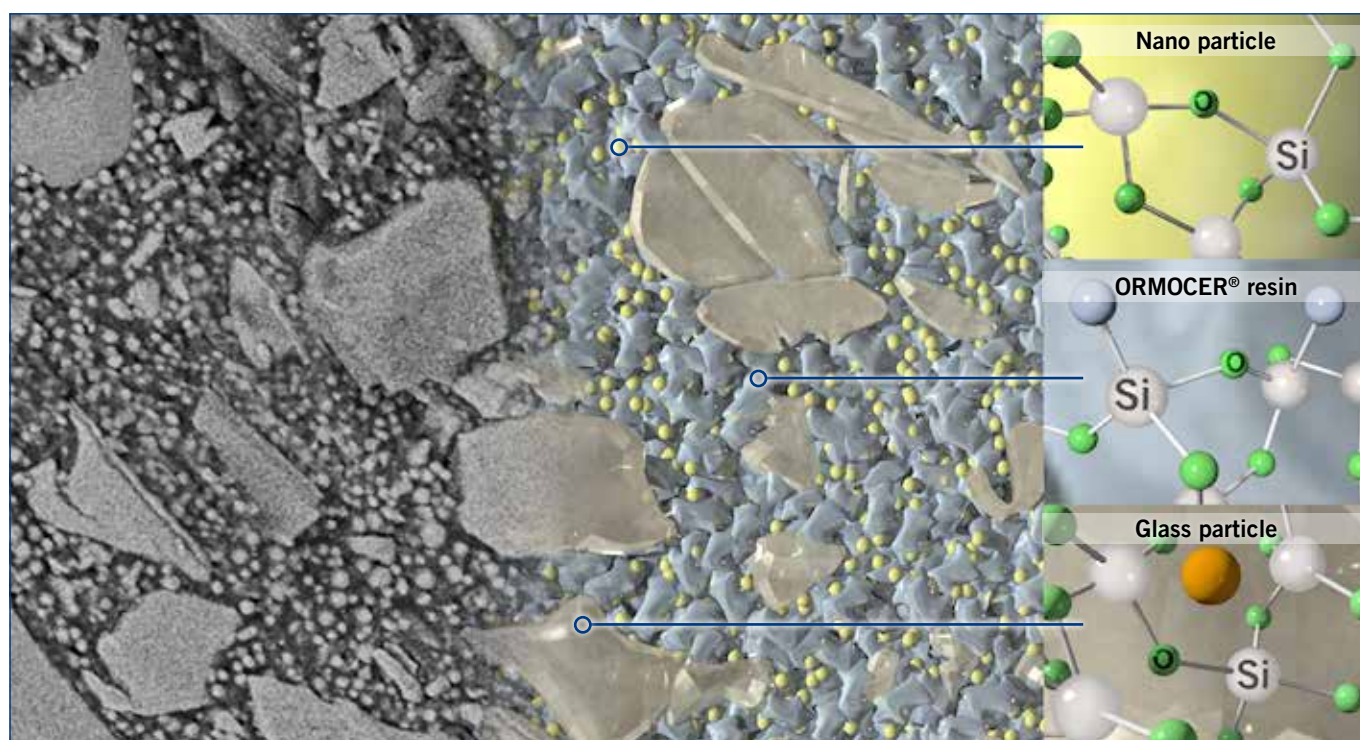
The highly innovative ORMOCER® technology – developed by the Fraunhofer Institute for Silicate Research ISC – was first used by VOCO as early as 1999, for the restorative composite Admira. Since then, this pioneering technology has been the subject of continued consistent and meticulous research and development. The aim was to launch an ORMOCER® restorative material completely free of classic monomers, while also implementing the nanohybrid technology developed by VOCO, which was first employed in 2003 for the manufacture of the composite material Grandio.

**The outstanding result is the universal nanohybrid ORMOCER® restorative material Admira Fusion.**

### "Pure Silicate Technology" inside

Silicon oxide forms the chemical base for Admira Fusion, not only for the fillers (nano fillers as well as glass ceramics) but also – and this represents the innovative achievement in development – for the resin matrix. This unique "Pure Silicate

Technology" makes Admira Fusion the worldwide first purely ceramic-based restorative material and offers several remarkable advantages in one. These are listed in a clear overview shown on pages 4 and 5.



Left image: TEM view of Admira Fusion, magnified 20,000 times; Source: Prof. Dr.-Ing. Dettlef Behrend, University of Rostock  
Right image: schematic drawing of the TEM image, including commentary

### ORMOCER® = Highly biocompatible

Admira Fusion contains no classic monomers, such as BisGMA, TEGDMA or HEMA, thus eliminating the potential for such substances to be released after polymerisation. The ORMOCER®s (organically modified ceramics) which have been used instead consist of large and precondensed mole-

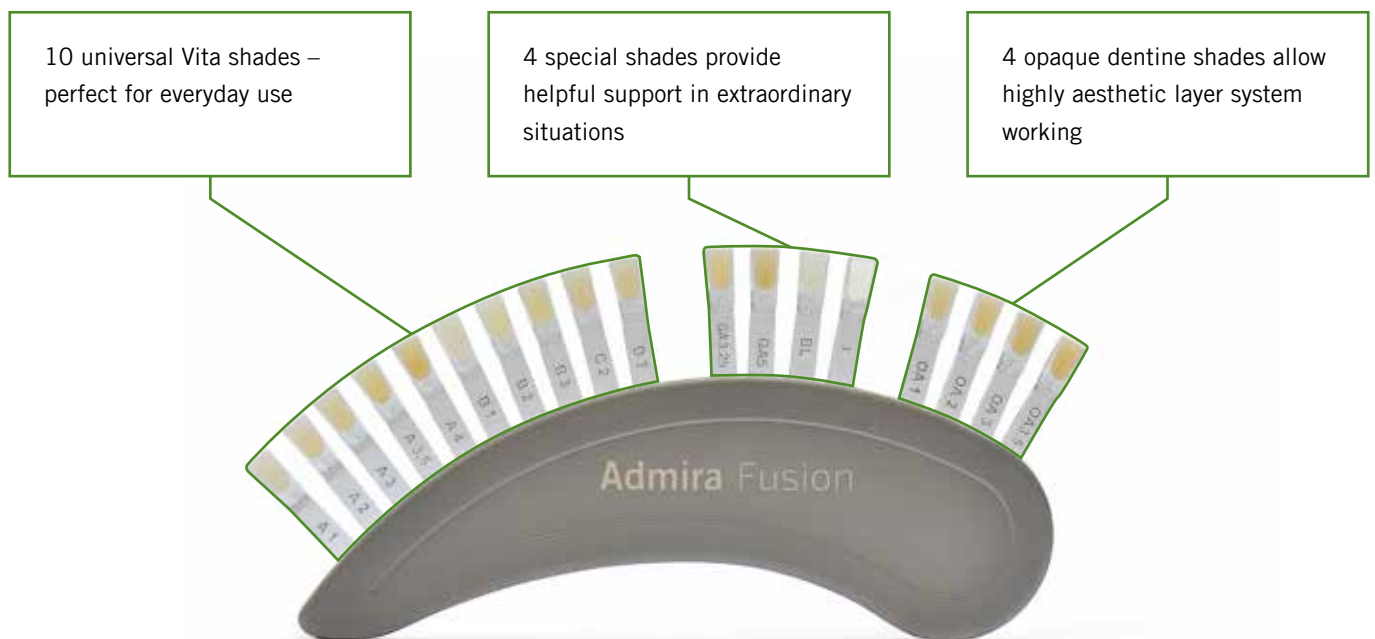
cules of an inorganic matrix. Their high degree of cross-linking and their special chemical structure give Admira Fusion its increased biocompatibility, which is higher still than that of conventional composite materials.

## Admira® Fusion

**SMOOTH. PREMIUM-QUALITY. AESTHETIC.**

Admira Fusion achieves results of highest quality for anterior and posterior restorations. The combination of the innovative ORMOCER® technology with that of the tried and tested nanohybrid materials means that you are able to work with a product which sets new standards, both with regard to its handling characteristics as well as its strength and stability. Convince yourself of the non-sticky, smooth consistency of this material, which adapts excellently to the cavity walls and can be modelled to perfection. The quick and simple high-gloss

polishing procedure, in conjunction with high surface hardness, makes Admira Fusion a guarantor for restorations which are aesthetic and remain intact for a long time. According to requirement and allowing for varying demands, Admira Fusion can be used either in a one-shade or a multiple-shade system. Three levels of translucency, or rather opacity, are available for this purpose, while the 10 universal Vita shades are perfectly balanced, achieving realistic results even with just one shade.



### Clinical Cases



Enamel-dentine fracture on tooth 21



Modelling of dentine core (OA2) and incisal edge (I)



Applying the final layer (A2) and sculpting the shape of the tooth



Aesthetic result after polishing



Insufficient amalgam restorations in teeth 46 and 47



Prepared cavities



Modelling of the material which is still malleable at this stage (A2)

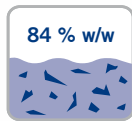


Finished, polished restorations

Source: Dr. Sânzio Marques, Passos / Brazil

Admira Fusion sets new standards in restorative therapy in respect of materials science. Now you have the option of placing purely ceramic-based restorations chairside, and in just the same straightforward way as you are accustomed to from working with a good restorative composite.

Admira Fusion allows you to offer your patients premium treatments in tooth shades which are of previously never achieved quality.



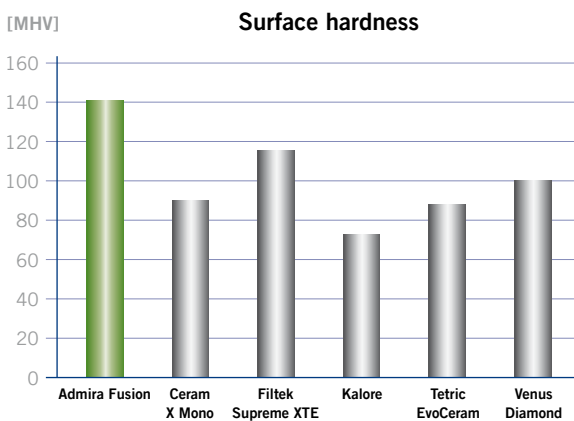
**Fact:**

Fillers and resin matrix based purely on silicon oxide, no content of classic monomers.

**Your benefit:**

Highest level of biocompatibility, minimised allergy potential.

High gloss after polishing



Source: Prof. Dr. D. Behrend, University of Rostock, 2014

**Fact:**

Very high surface hardness (141 MHV), coupled with simple and effective polishing procedure.

**Your benefit:**

Highly stable and smooth fillings are best able to withstand the loads imposed on a daily basis by chewing, and they also impede the adhesion of microorganisms.

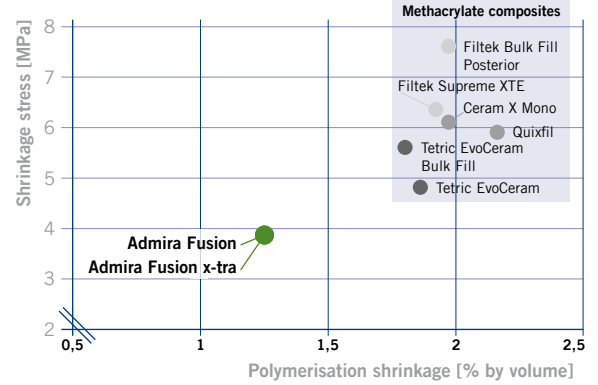


**Fact:**

Extremely low polymerisation shrinkage (1.25% by volume) and very low shrinkage stress (3.87 MPa).

**Your benefit:**

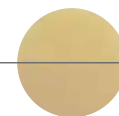
Marginal integrity of the highest standard for fillings remaining intact for the long term.



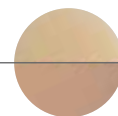
Source: VOCO in-house measurement, 2014

Initial

After 2 weeks of storage in red wine



Admira Fusion A3



Venus Diamond A3



Tetric EvoCeram A3

**Fact:**

Ultimate colour stability, even in extreme conditions (2 weeks storage in red wine).

**Your benefit:**

Lastingly aesthetic restorations equate to highly satisfied patients.

Ceram X Mono, Filtek Bulk Fill Posterior, Filtek Supreme XTE, Kalore, Quixfil, Tetric EvoCeram, Tetric EvoCeram Bulk Fill, Venus Diamond and Vita are not registered trademarks of VOCO GmbH.

# Admira® Fusion x-tra

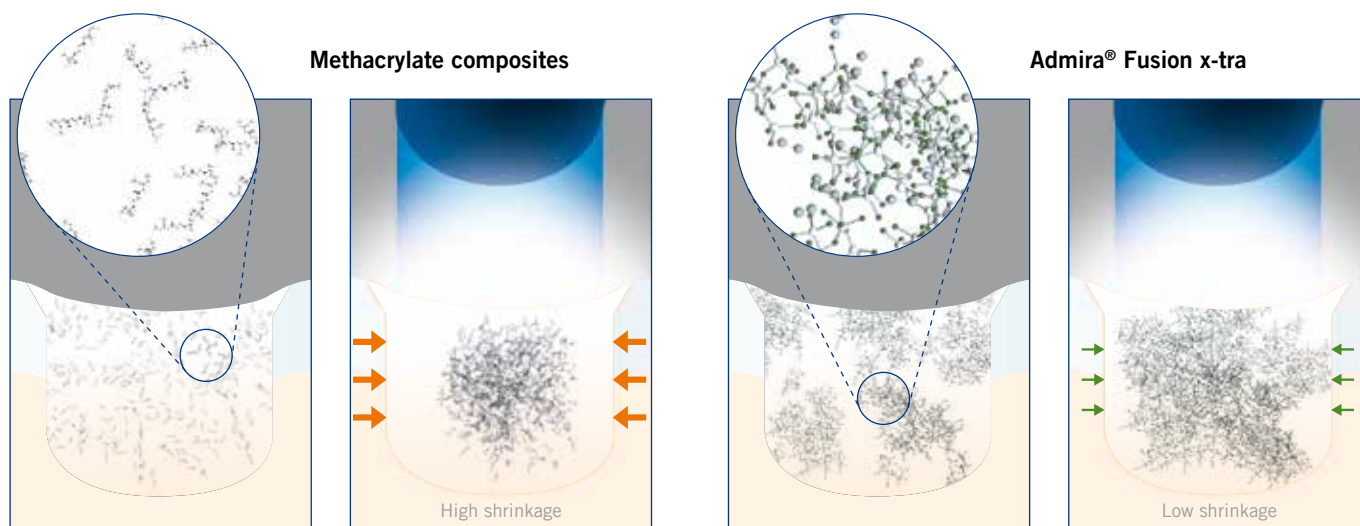
**QUICK. SIMPLE. CERAMIC.**

Admira Fusion x-tra is the fast-track version of Admira Fusion. This means that this restorative material can be applied in layers of up to 4 mm and then reliably cured. This makes placing posterior restorations particularly quick and economical for you. The universal shade U further simplifies handling, as it provides aesthetic results by adapting, chameleon-like, to the surrounding dental substance.

## Marginal integrity of the highest standard

The special ORMOCER® compound molecules in Admira Fusion x-tra reduce the volume shrinkage to an extremely low level (1.25 % by volume) in conjunction with very low shrinkage stress (3.87 MPa). Especially in cases of

very large cavities, which are filled in the bulk technique, these two factors guarantee optimal marginal integrity of the restorative material and thus significantly contribute to the long-term success of the restoration.



## High quality achieved with one universal shade

Not only does Admira Fusion x-tra rapidly produce posterior restorations which are of high quality from a material science point of view, it also saves you having to select a shade, which

can at times be complicated. At the same time, you will be convinced by the aesthetic final result, which will be to the permanent satisfaction of your patients.

## Clinical Case



Insufficient composite restoration in tooth 45

Source: Dr. Walter Denner, Fulda / Germany



Prepared cavity awaiting filling



Application of Admira Fusion x-tra in 4-mm layers



Functional and aesthetic final result

## Admira® Fusion x-tra

### NANOHYBRID ORMOCER® RESTORATIVE MATERIAL, 4 MM

#### Indications

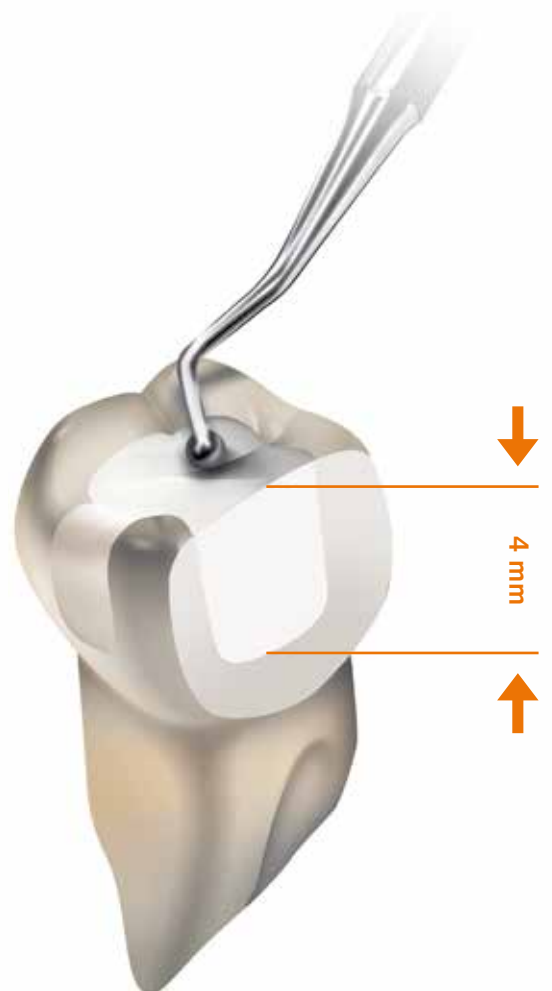
Class I and II posterior restorations  
 Base in class I and II cavities  
 Class V restorations  
 Locking, splinting of loose anteriors  
 Extended fissure sealing  
 Repairing veneers, small enamel defects and temporary C&B-materials  
 Restoration of deciduous teeth  
 Core build-up

#### Presentation

REF 2810 Syringe 3 g universal  
 REF 2811 Caps 15 × 0.2 g universal  
 REF 9301 Dispenser – Caps

#### Advantages

- Purely ceramic-based, fast-track restorative material
- Fast and high-quality – reliable curing of 4 mm layers
- Thanks to the most innovative ORMOCER® technology – by far the lowest polymerisation shrinkage (1.25 % by volume) and particularly low level of shrinkage stress, providing optimal marginal integrity – inert, so highly biocompatible and extremely resistant to discolouration
- Excellent handling, simple high-lustre polishing procedure coupled with high surface hardness guarantee first-class long-term results
- Universal shade with chameleon effect
- Compatible with all conventional bonding agents
- In terms of materials science identical to the universal restorative material Admira Fusion – a perfectly matched system



# Admira® Fusion

## UNIVERSAL NANOHYBRID ORMOCER® RESTORATIVE MATERIAL

### Indications

- Class I to V restorations
- Base in class I and II cavities
- Reconstruction of traumatically damaged anteriors
- Facetting of discoloured anteriors
- Correction of shape and shade for improved aesthetic appearance
- Locking, splinting of loose anteriors
- Repairing veneers, small enamel defects and temporary C&B-materials
- Extended fissure sealing
- Restoration of deciduous teeth
- Core build-up
- Composite inlays



### Advantages

- The worldwide first purely ceramic-based restorative material
  - pure Silicate Technology, i.e., fillers and resin matrix based purely on silicon oxide
  - contains no classic monomers
- Thanks to the most innovative ORMOCER® technology
  - by far the lowest polymerisation shrinkage (1.25 % by volume) and particularly low level of shrinkage stress in comparison to all conventional restorative composites
  - inert, so highly biocompatible and extremely resistant to discolouration
- Completely universal – meeting highest demands in anterior and posterior regions
  - perfect coordination of translucence with opacity for natural results
  - the optimal selection of shades enables highly flexible working using either the single or multiple shade system
- Excellent handling, simple high-lustre polishing procedure coupled with high surface hardness guarantee first-class long-term results
- Compatible with all conventional bonding agents

### Presentation

- REF 2750 Set + bond  
syringe 5 x 3 g (A2, A3, GA3.25, A3.5, Admira Fusion x-tra),  
shade guide + Futurabond U *SingleDose* 20 pcs., accessories
- REF 2752 Shade guide

- REF 2780 Set + bond  
Caps 75 x 0.2 g (15 each of A2, A3, GA3.25, A3.5,  
Admira Fusion x-tra), shade guide + Futurabond U *SingleDose*  
20 pcs., accessories

Shade	Syringe 3 g	Caps 15 x 0.2 g	Shade	Syringe 3 g	Caps 15 x 0.2 g	Shade	Syringe 3 g	Caps 15 x 0.2 g
A1	REF 2754	REF 2782	B1	REF 2762	REF 2790	OA3	REF 2772	REF 2800
A2	REF 2755	REF 2783	B2	REF 2763	REF 2791	OA3.5	REF 2773	REF 2801
A3	REF 2756	REF 2784	B3	REF 2764	REF 2792	BL	REF 2775	REF 2803
GA3.25	REF 2757	REF 2785	C2	REF 2766	REF 2794	Incisal	REF 2776	REF 2804
A3.5	REF 2758	REF 2786	D3	REF 2768	REF 2796	Mixed	–	REF 2806*
A4	REF 2759	REF 2787	OA1	REF 2770	REF 2798			
GA5	REF 2760	REF 2788	OA2	REF 2771	REF 2799			

VOCO GmbH  
Anton-Flettner-Straße 1-3  
27472 Cuxhaven  
Germany  
  
Tel.: +49 (0) 4721-719-0  
Fax: +49 (0) 4721-719-140  
  
info@voco.com  
www.voco.com

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