



# Admira Fusion 5

**NANO-HYBRID ORMOCER® RESTORATIVE  
MATERIAL WITH SIMPLIFIED SHADE SYSTEM**

# Admira Fusion 5

## SIMPLIFIED SHADE SYSTEM

Correct determination of the natural tooth shade is indispensable for an aesthetic result of the restoration. One of the most common methods of selecting tooth colour is the use of shade guides. However, the correct determination is influenced by many factors, so that it is a challenging task even for experienced dentists and can lead to an incorrect shade selection. VOCO has therefore set itself the goal of offering dentists a state-of-the-art universal restorative material that makes everyday practice extremely easy. The solution: the further development of the innovative, purely ceramic-based ORMOCER® filling material Admira Fusion.

**The determination of natural tooth colour is a complex phenomenon:**

- **Shade guides**

These contain a limited range of shades, which is why many tooth shades have to be determined by approximating the closest shade in the shade guide.

- **Individual and natural shade gradient**

The natural tooth consists not only of one colour, but of several shades (see fig. on the right).

- **Light and eyes**

Depending on the colour temperature and lighting, the tooth colour can vary. Also the individual perception like fatigue of the eyes at age are further influencing factors.

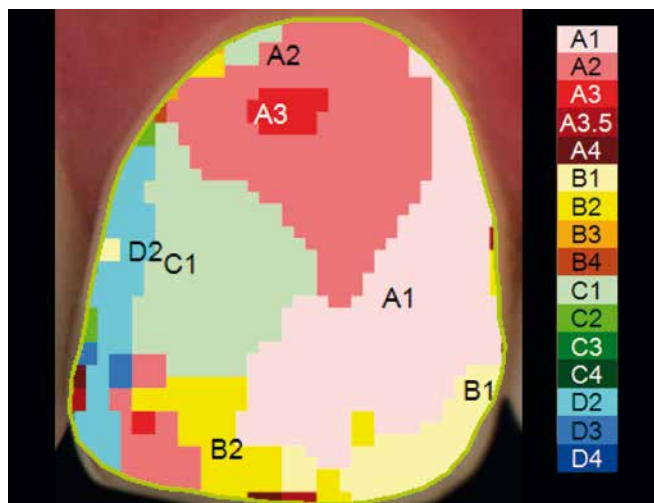


Image of tooth 21 taken with a spectrophotometer.  
Source: Prof. Dr. Felix Krause, RWTH Aachen University Hospital / Germany

### Simplified shade system through Cluster-Shades

Admira Fusion 5 uses five different Cluster-Shades, each bundling several VITA® classical shades. This provides adaptation to the natural colour gradient of the tooth as well as more efficient and easy shade selection. Thanks to the simplified shade system, all 16 VITA® classical shades can be

covered with only five Cluster-Shades. Multi-shade layering is not necessary. This means that you are optimally positioned for your everyday practice with only five shades and can thus considerably streamline your inventory. This enables a better overview, and incorrect stocks are a thing of the past.

### Cluster-Shade-System

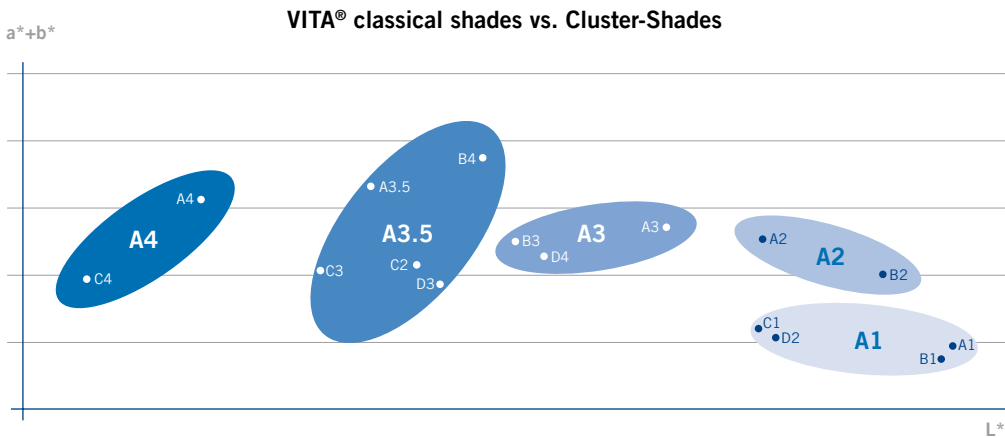
Admira Fusion 5	A1				A2		A3			A3.5				A4		
VITA® classical	A1	B1	C1	D2	A2	B2	A3	B3	D4	A3.5	C2	C3	D3	B4	A4	C4

VITA® classical denture teeth in shades A1–C4 with standardized cavity filled with Admira Fusion 5 Cluster-Shades A1, A2, A3, A3.5, A4.  
Result: The excellent chameleon effect covers the entire VITA® shade range with only 5 Cluster-Shades. Source: VOCO GmbH, 2023

### New and patented ORMOCER® resin matrix

But how is it possible that all classical VITA® shades can be covered with only 5 Cluster-Shades? By specifically adapting the resin matrix to the size and optical properties of the nano-hybrid particles, optimised light scattering can be achieved.

The result: a targeted and enhanced chameleon effect within the respective Cluster-Shade, which enables the perfect matching of the restorative material to the natural tooth shade.



VITA® classical shades arranged in the simplified colour space ( $L^*$ ,  $a^*$ ,  $b^*$ ) with the associated Admira Fusion 5 clusters. Source: VOCO GmbH, 2023

By optimising the ORMOCER® resin matrix and the resulting change in light scattering, it has also been possible to significantly reduce the polymerisation time. A light-curing time of only 10 seconds is required for all five shades. This saves valuable time and increases your efficiency.

### Only 10 seconds light-curing for all shades



#### Expert opinion

“Due to my high aesthetic demands, I was sceptical at first whether all cavities could really be filled aesthetically with just five shades. But I am thrilled with the final result. The filling material is not visible. In addition, it adapts very well in the cavity and has a low stickiness to the instrument.”

*Dr. Hanke Faust, Germany*



## Admira Fusion 5

### PURELY CERAMIC-BASED

#### Proven and innovative ORMOCER® technology

With Admira Fusion 5, you benefit from the advantages of the proven and innovative technology of our high-performance composite Admira Fusion. The combination of the nano-hybrid with the ORMOCER® technology developed together with the Fraunhofer Institute for Silicate Research enables a purely ceramic-based material. This is because silicon oxide forms the

chemical basis for both the fillers and the resin matrix. This unique “Pure Silicate Technology” brings several remarkable advantages: In addition to the by far lowest polymerisation shrinkage of 1.25% by volume, Admira Fusion 5 is excellently biocompatible because it contains no classic monomers.

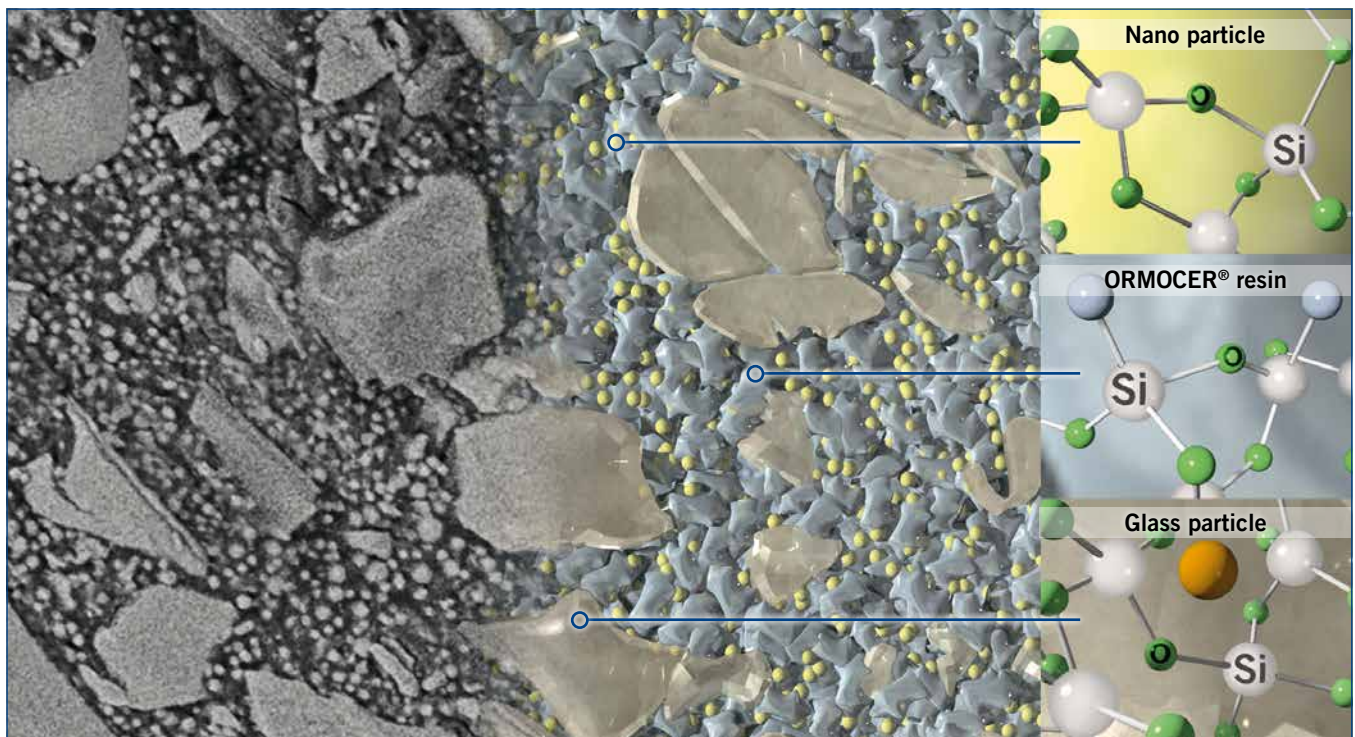


Fig. left: TEM image of Admira Fusion at 20,000x magnification; source: Prof. Dr.-Ing. Detlef Behrend, University of Rostock.

Fig. right: Schematic drawing of the TEM image with explanation.

#### ORMOCER® = Excellent biocompatible

Admira Fusion contains no classic monomers, such as Bis-GMA [BPA], 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 pre-condensed molecules of an inorganic matrix with a high degree of cross-linking.

# Admira Fusion 5

## A STRONG MATERIAL

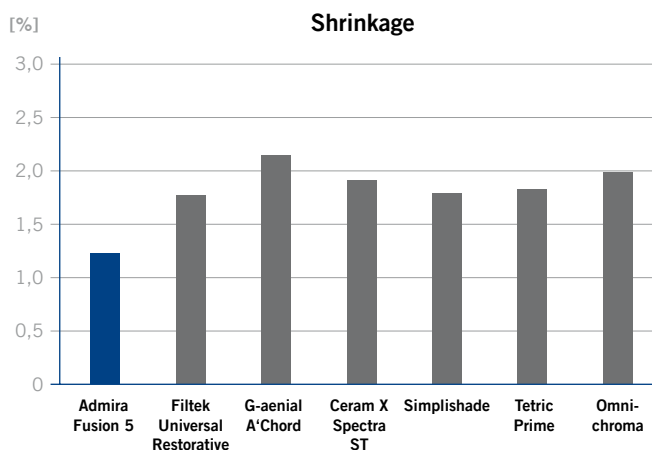
### First-class restorations

The combination of the innovative ORMOCER® with the proven nano-hybrid technology enables you to process a material that sets new standards in terms of its handling properties as well as its strength and stability. With Admira Fusion 5, you can achieve the highest quality restorations in the anterior and posterior regions.

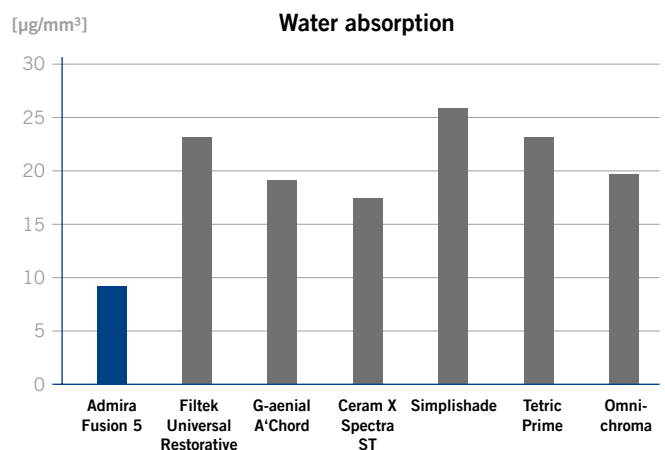
The particularly low shrinkage during light polymerisation of only 1.25% by volume, combined with a very low shrinkage

stress compared to all conventional restorative composites, ensure optimum marginal seal.

With the absorption of water, discolouring substances can also penetrate into the fillings. Due to the very low water absorption of  $9.1 \mu\text{g}/\text{mm}^3$ , the filling material impresses with its high colour stability and is thus a guarantor for very aesthetic long-term results.



Source: Internal measurement



Source: Internal measurement

### Easy handling

In extensive tests, the handling properties of the material were rated particularly positively. Due to its non-sticky and smooth consistency, the material adapts very well to the cavity walls and can be modelled excellently. The fast and easy high-gloss polishing combined with the excellent mechanical properties make Admira Fusion 5 a guarantor for long-term aesthetic restorations in the anterior and posterior region.

### High flexibility

Admira Fusion 5 can be optimally combined with all products of the Admira Fusion product family. If, for example there is a desire for an opaque cover in special clinical situations, Admira Fusion or Admira Fusion Flow can be used, which are available in various shades. For lining with a flowable, Admira Fusion Flow is the right choice.

# Admira Fusion 5

**SIMPLY FASTER. SIMPLY AESTHETIC.**

## Indications

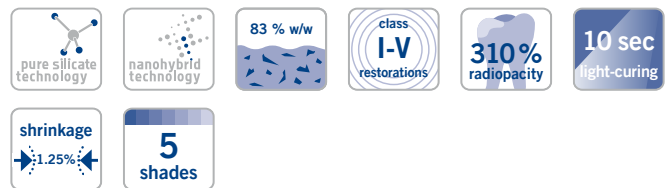
- Class I to V restorations
- Base in class I and II cavities
- Reconstruction of traumatically damaged anteriors
- Facetting of discoloured anteriors
- Correction of shape and shade for improved aesthetic appearance
- Locking, splinting of loose teeth
- Repairing veneers, small enamel defects and temporary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

## Presentation

- REF 6243 Trial pack  
10 x 0.2 g Caps (2 each of x A1, A2, A3, A3.5, A4), 10 x Futurabond U *SingleDose*, shade card, accessories
- REF 6225 Syringe 5 x 3 g  
(A1, A2, A3, A3.5, A4), shade card
- REF 6235 Caps 75 x 0.2 g  
(15 each of x A1, A2, A3, A3.5, A4), shade card

## Vorteile

- **Simplified shade system:** All VITA® classical shades can be covered with just 5 Cluster-Shades
- **New ORMOCER® resin matrix:** Enhanced chameleon-effect through optimised light scattering
- **Efficient:** Significantly reducing your inventory
- **Fast:** Only 10 seconds light-curing for all shades
- **Excellent biocompatibility:** No classic monomers (no Bis-GMA [BPA], TEGDMA, UDMA etc.)
- **First-class:** Highly stable material as well by far the lowest polymerisation shrinkage (1.25 % by volume)



Refills	A1	A2	A3	A3.5	A4
Syringe 3 g	6227	6228	6229	6230	6231
Caps 15 x 0.2 g	6237	6238	6239	6240	6241



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