Admira Fusion

NANO ORMOCER® RESTORATIVE MATERIALS
Admira® Fusion

**ALL CERAMIC DIRECT RESTORATIVE**

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 introduced and utilized in 2003 with the launch of the nanohybrid composite Grandio.

The outstanding results of this endeavor are a range of nano-hybrid ORMOCER® restorative materials that make up the Admira® Fusion family of products.

"Pure Silicate Technology“ inside

Silicon oxide forms the chemistry 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 world’s first purely ceramic-based restorative material and offers several remarkable advantages.

ORMOCER® = Highly biocompatible

Admira® Fusion contains no classic monomers, such as Bisphenol A, BisGMA, TEDGMA or HEMA, thus eliminating the potential for such substances to be released after polymerization. The ORMOCER® (ORganically MOdified CERamics) which have been used in place of conventional monomers consist of large and precondensed molecules of an inorganic matrix with a high degree of cross-linking. With this ORMOCER® technology the overall results on Admira® Fusion is one of “excellent biocompatibility".¹

¹The overall verdict on Admira® Fusion is one of “excellent biocompatibility”.¹
Admira® Fusion

UP TO 50% LESS SHRINKAGE THEN CONVENTIONAL COMPOSITES

Composite resins have been in use within dentistry for almost 50 years and along with their use has always been a concern regarding the impact of their initial shrinkage (initially as high as 5% though currently around 2 to 3%) as it relates to marginal integrity and micro-leakage and in the end the overall integrity and longevity of the restoration. Today Admira® Fusion’s nano-ORMOCER® technology offers a step forward in the evolution of direct restorations and specifically in the arena of initial shrinkage with only 1.25% (by volume) shrinkage which is up to 50% less shrinkage than many conventional composites.

Marginal integrity of the highest standard
The special ORMOCER® compound molecules in Admira® Fusion 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.

Methacrylate composites
High shrinkage

Admira® Fusion
Low shrinkage
Admira® Fusion sets new standards in restorative dentistry in respect to 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 with a level of quality previously never achieved.

A NEW LEVEL OF BIOCOMPATIBILITY

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

Benefit to You:
Highest level of biocompatibility, minimized allergy potential.

HIGH SURFACE HARDNESS FOR BETTER LONGEVITY

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

Benefit to You:
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 micro-organisms.
UP TO 50% LESS SHRINKAGE AND SHRINKAGE STRESS

**Fact:**
Extremely low polymerization shrinkage (1.25% by volume) and very low shrinkage stress (3.87 MPa).

**Benefit to You:**
Marginal integrity of the highest standard for fillings remaining intact for the long term.

![Graph showing comparison of shrinkage and shrinkage stress of different materials](image)

Source: VOCO in-house measurement, 2014

ELEVATED AESTHETICS WITH EXTENDED LONGEVITY

**Fact:**
Ultimate color stability, even in extreme conditions (2 weeks storage in red wine).

**Benefit to You:**
Long lasting aesthetic restorations equate to highly satisfied patients.

![Graph showing initial and after 2 weeks of storage in red wine](image)

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 achieves results of the highest quality for anterior and posterior restorations. The combination of the innovative ORMOCER® technology with that of the tried and tested nanohybrid technology 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. We invite you to convince yourself of the non-sticky, smooth consistency of this material, which adapts excellently to the cavity walls and can be modeled to perfection. The quick and simple high-gloss polishing procedure, in conjunction with its high surface hardness, makes Admira® Fusion a guarantor for restorations which are aesthetic and remain intact for a long time. In accordance to the varying clinical requirements, needs and/or demands, Admira® Fusion can be used either in a one-shade or a multiple-shade system. Three levels of translucency (i.e. 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-dentin fracture on tooth 9
Modeling of dentin 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 30 and 31
Prepared cavities
Modeling of the material which is still malleable at this stage (A2)
Finished, polished restorations
Admira® Fusion x-tra

**NANO ORMOCER® BULK FILL RESTORATIVE MATERIAL**

### 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

### 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 discoloration
- 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

### Presentation
- REF 2810 Syringe 3 g universal
- REF 2811 Caps 15 x 0.2 g universal

Admira® Protect

**LIGHT-CURED, NANO-FILLED ORMOCER® DESENSITIZER**

### The first light-curing ORMOCER®-based desensitizer
Admira® Protect is an innovative ORMOCER®-based light-curing protective varnish for desensitization. Hypersensitivity, especially cervical dentin hypersensitivity, is reduced for up to 2 years, in most cases after only one application. Admira® Protect is also recommended to desensitize crown margins, after tooth cleaning and scaling and for exposed cervical areas. The varnish safely seals the tubules permanently. Transfer of stimuli is significantly reduced. A special filler technology designed for this indication provides very good wear resistance of the protective layer. The ORMOCER®-matrix of Admira® Protect offers excellent biocompatibility.

### Advantages
- No hypersensitivity for up to two years
- ORMOCER®-based biocompatibility
- Special nano-filler technology for high wear resistance
- Contains Fluoride

### Admira® Protect in practical SingleDose
- Fast and simple dispensing
- No spilling

### Presentation
- **Admira® Protect**
  - REF 1650 pack 1-4.5ml bottle
- **Admira® Protect SingleDose**
  - REF 1651 pack 50-0.06ml SingleDose, 50 Micro Tim
  - REF 1652 pack 200-0.06ml SingleDose, 200 Micro Tim
Admira® Fusion

UNIVERSAL NANO ORMOCER® RESTORATIVE MATERIAL

Indications
Class I to V restorations
Base in class I and II cavities
Reconstruction of traumatically damaged anteriors
Facetting of discolored 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 world's first purely ceramic based direct universal restorative material
• Pure Silicate Technology: Fillers and matrix are based purely on silicate oxide
• No classic monomers for higher biocompatibility (no BISGMA, BPA, UDMA or TEDGMA etc.)
• Nano-ORMOCER® technology reduces shrinkage and shrinkage stress by up to 50% compared to composites and leads to outstanding shade stability
• Non-sticky consistency for easy handling
• Perfect balance of translucency and opacity for natural looking restorations
• Easy to polish to a high shine luster
• High 84% fill rate for high wear resistance
• Compatible with all conventional bonding agents

Presentation
REF 2750  Syringe Kit
  syringe 5 × 3 g (A1, A2, A3, A3.5, Admira® Fusion x-tra), shade guide, accessories
REF 2752  Shade guide

REF 2780  Caps Kit
  Caps 75 × 0.2 g (15 each of A1, A2, A3, A3.5, Admira® Fusion x-tra), shade guide, accessories

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*(3 each of B1, C2, D3, BL, Incisal)