

THE FIRST ALL CERAMIC-BASED FLOWABLE DIRECT RESTORATIVE

Admira Fusion Flow

HIGH BIOCOMPATIBILITY
LOW SHRINKAGE
LOW SHRINKAGE
STRESS

Admira Fusion *Flow*

FLOWABLE NANO-ORMOCER® DIRECT RESTORATIVE



VOCO
THE DENTALISTS

Admira Fusion / Admira Fusion Flow

THE WORLD'S FIRST ALL CERAMIC-BASED FLOWABLE DIRECT RESTORATIVE

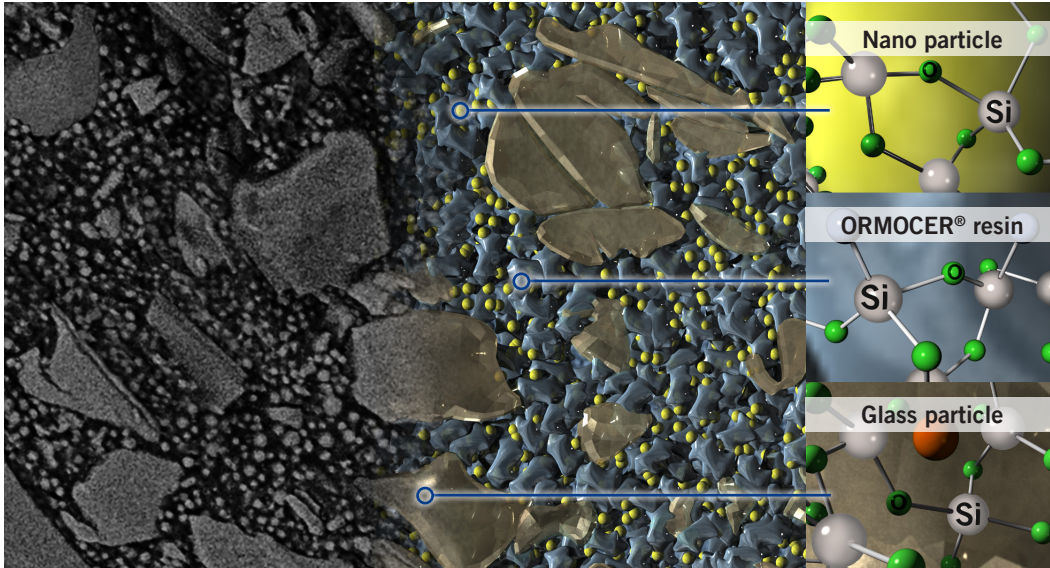
The highly innovative ORMOCER® technology – developed by the Fraunhofer Institute for Silicate Research ISC – was first used by VOCO as early as 1999 for the restorative composite Admira. Since then, this pioneering technology has been the subject of continued consistent and meticulous research and development. The aim was to launch an ORMOCER® restorative material completely free of classic monomers, while also implementing the nano-hybrid technology developed by VOCO, which was first introduced and utilized in 2003 with the launch of the nano-hybrid 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 and Admira Fusion Flow, 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 Flow the world's first all ceramic-based flowable direct restorative material and offers several remarkable advantages.



Left image:
TEM view of Admira Fusion,
magnified 20,000 times;
Source: Prof. Dr.-Ing. Detlef Behrend,
University of Rostock

Right image:
schematic drawing
of the TEM image,
including commentary

ORMOCER® = Highly biocompatible

Admira Fusion and Admira Fusion Flow contains no classic monomers, such as BisGMA, TEGDMA or HEMA, thus eliminating the potential for such substances to be released after polymerization.

The ORMOCER® (**OR**ganically **MO**dified **CER**amics) 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 in Admira Fusion and Admira Fusion Flow are "excellent biocompatibility".⁽¹⁾

[1] Leyhausen et al., Hannover Medical School, report to VOCO, 2015.

Admira Fusion Flow

THE WORLD'S FIRST ALL CERAMIC-BASED FLOWABLE DIRECT RESTORATIVE

Flowable restorative materials offer unique properties that provide solutions that otherwise would be unavailable to practitioners. For those practitioners that have found these unique solutions valuable, Admira Fusion Flow will be an ideal material to create restorations of equal high-level quality, esthetics and results BUT with the added benefit of an entirely new level of biocompatibility, low shrinkage and low shrinkage stress. Based on the same evolutionary "Pure Silicate Technology" as Admira Fusion, Admira Fusion Flow enables one to optimally treat everyday situations as well as special cases with an all ceramic-based flowable.

Low Shrinkage and Shrinkage Stress

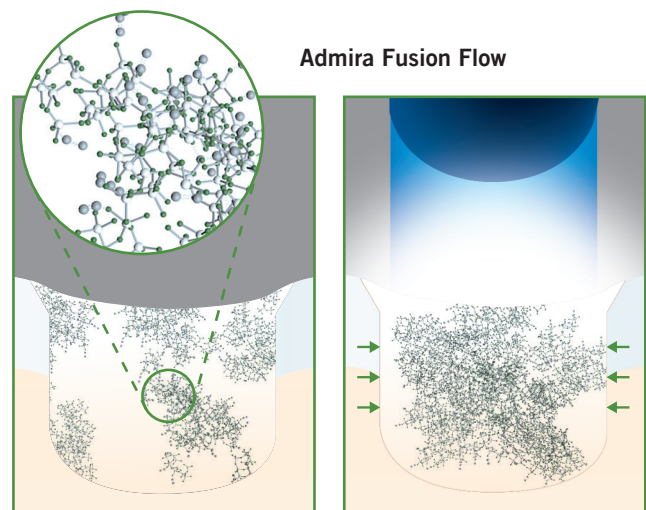
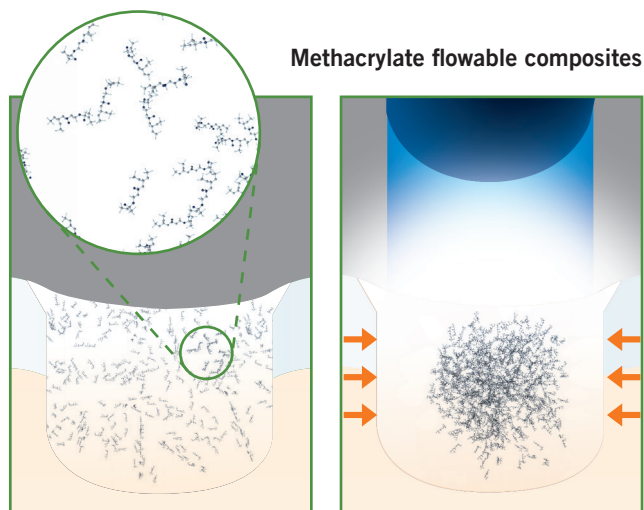
Thanks to its innovative nano-ORMOCER® technology, Admira Fusion Flow exhibits a particularly low level of volumetric shrinkage (2.75% w/w) and up to 50% less shrinkage than traditional flowable composites. Additionally Admira Fusion Flow has very low shrinkage stress (7.27 MPa) especially for cavities with a high c-factor. Admira Fusion Flow therefore represents an ideal foundation and outstanding supplement for the universal restorative material Admira Fusion.

In addition, it is a first-class esthetic "troubleshooter" due to its high-grade surface hardness in combination with good - and simple - polishability.

Versatile and esthetic

Admira Fusion Flow is available in 12 shades of extreme color stability that perfectly match the range of Admira Fusion shades. Thus Admira Fusion Flow helps you create durably esthetic restorations in a convenient manner.

The special shades Bleach-Light (BL) and White-Opaque (WO) also serve to treat unique indications. Bleach-Light can not only be used for whitened teeth, but also in pediatric dentistry. White-Opaque is an excellent foundation for restorations in cases such as discoloration in dentinal areas or core build-ups.



Admira Fusion Flow

FLOWABLE. BIOCOMPATIBLE. ESTHETIC.

Clinical Case



Mesial caries on tooth 7, disto-palatinal caries on tooth 8



Pre-filling work on the prepared cavities according to the rules of adhesive filling therapy



Simple application and optimal wetting behavior of Admira Fusion Flow



Outstanding result created with Admira Fusion Flow / Admira Fusion

Source: Dr. Walter Denner, Fulda / Germany

“Smart” handling

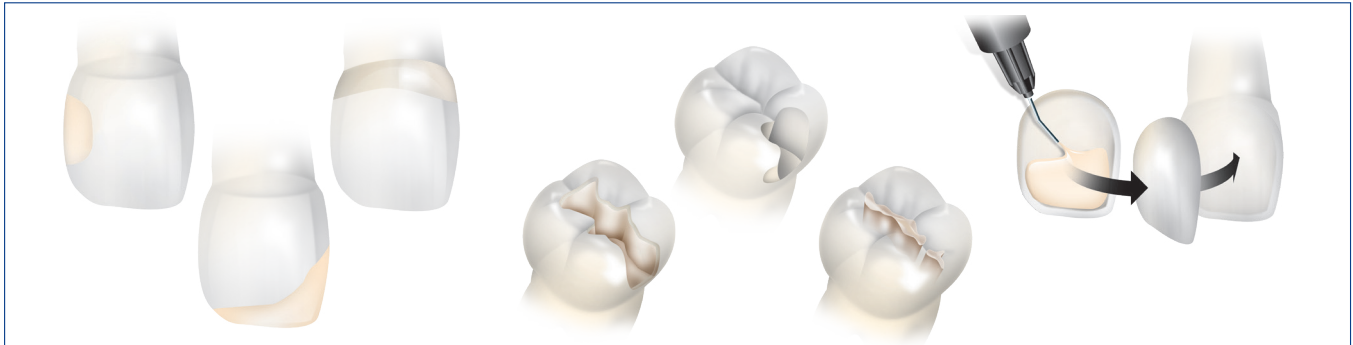
Admira Fusion Flow is a thixotropic material characterized by what can be defined as a “flow-on-demand” feature, which is of great advantage to the user because the material flows when under pressure but keeps its shape and remains in place as required for light-curing. Outstanding flow characteristics ensure an excellent degree of wetting throughout the entire cavity. The material adapts perfectly to the cavity walls and flawlessly fills even undercuts and tunnel preparations.



Technical data		
Filler content	74.0% by weight	DIN 51081
Polymerization shrinkage	2.75% by vol.	analogous Watts et al.
Shrinkage stress	7.27 MPa	analogous Watts et al.
3-point flexural strength	115 MPa	ISO 4049
Modulus of elasticity	5.8 GPa	ISO 4049:1988
Compressive strength	281 MPa	analogous ISO 9917
Radiopacity	240 %AI	ISO 4049
Water absorption	12 µg / mm ³	ISO 4049
Water solubility	< 0.1 µg / mm ³	ISO 4049
Depth of cure	2.7 mm	ISO 4049

Admira Fusion Flow

FLOWABLE NANO-ORMOCER® RESTORATIVE MATERIAL



Indications

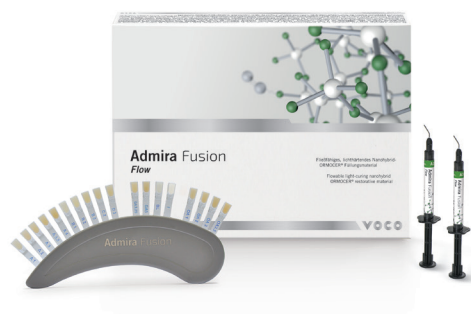
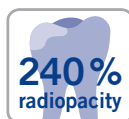
Filling of small cavities and extended fissure sealing
Blocking out undercuts
Lining or coating cavities
Fillings of class III–V cavities
Repairing fillings, veneers and temporary restorations
Luting translucent prosthetic pieces (including veneers)
Locking, splinting of loose teeth

Advantages

- The world's first all ceramic-based direct flowable restorative material
 - Pure Silicate Technology: Fillers and matrix are based purely on silicon oxide
 - No classic monomers for higher biocompatibility (no BisGMA, UDMA, HEMA or TEGDMA etc.)
 - Nano-ORMOCER® technology reduces shrinkage (2.75% by volume) and shrinkage stress to the level of universal composites
 - Inert for outstanding shade stability
 - Compatible with conventional adhesives
- Easy to polish to a high shine luster
- Excellent wettability
- Thixotropic material that will "flow on demand" without slumping
- Non-Dripping Syringe Technology (NDT®)
- Radiopaque (240 %Al)
- 12 shades for esthetic restorations – perfectly matching the shade range of the packable version, Admira Fusion

Admira Fusion Flow

FLOWABLE NANO-ORMOCER® RESTORATIVE MATERIAL



Presentation

REF 2816 Syringe Intro Kit 5 x 2 g (A1, A2, A3, A3.5, WO), shade guide, accessories

REF 2146 Intraoral tips type 41, 100pcs.

Shade	Syringe 2 x 2 g	Shade	Syringe 2 x 2 g
A1	REF 2818	B2	REF 2825
A2	REF 2819	C2	REF 2826
A3	REF 2820	Incisal	REF 2828
A3.5	REF 2821	OA2 (opaque A2)	REF 2829
A4	REF 2822	BL (Bleach)	REF 2831
B1	REF 2824	WO (White Opaque)	REF 2832

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