UNIVERSAL COMPOSITES

# **BRILLIANT** Filling Materials

## Product Guideline


COLTENE


BRILLIANT EverGlow™
Universal Submicron Hybrid Composite
A1/B1
BRILLIANT EverGlow™
Universal Submicron Hybrid Composite
OA1
BRILLIANT EverGlow™
Universal Submicron Hybrid Composite
Trans
BRILLIANT EverGlow
Universal Submicron Hybrid Composite
Trans
BRILLIANT EverGlow
Universal Submicron Hybrid Composite
OA1
BRILLIANT EverGlow®
Flow
Flowable bulk-fill composite
BRILLIANT Bulk Fill Flow

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# BRILLIANT EVERGLOW

## ENDURING GLOSS – MADE BRILLIANT

BRILLIANT EverGlow is a sculptable Universal Submicron Hybrid Composite that allows for high aesthetic restorations with a reduced, clear spectrum of shades. It is a versatile filling material which fully meets high requirements for anterior and posterior restorations, offering simple handling, excellent blend-in properties and long-lasting brilliance.

## FEATURES AT A GLANCE

· Long-lasting brilliance
· Aesthetic single-shade restorations
· Versatile shade system with three translucency levels
· Outstanding polishability and processing properties

BRILLIANT EverGlow contains antibacterial zinc oxide
(see Atmaca, S., Gül, K., & Cicek, R. (1998). The effect of zinc on microbial growth; Padmavathy, N., & Vijayaraghavan, R. (2008). Enhanced bioactivity of ZnO nanoparticles—an antimicrobial study.)

## INDICATIONS

BRILLIANT EverGlow is applied using the increment technique and is indicated for:
· direct restorations of all cavity classes
· luting and repair of composite and ceramic restorations

## BRILLIANT EVERGLOW FLOW

Complementing the product assortment, BRILLIANT EverGlow is also available in a flowable consistency. The material combines a low viscous consistency with high stability and thixotropy, allowing a controlled and comfortable application.

# SHADE SELECTION

## SHADE SPECTRUM

The BRILLIANT EverGlow line comprises 7 universal, 2 translucent and 5 opaque shades. They integrate so well into the existing surroundings, that one shade covers two VITA shades at a time, resulting in A1/B1 or A2/B2, for example.

**Universal shades:**
Can be applied separately or in combination with opaque and/or translucent shades.

**Translucent shades:**
Can be applied separately or following the universal shade as a coating layer.

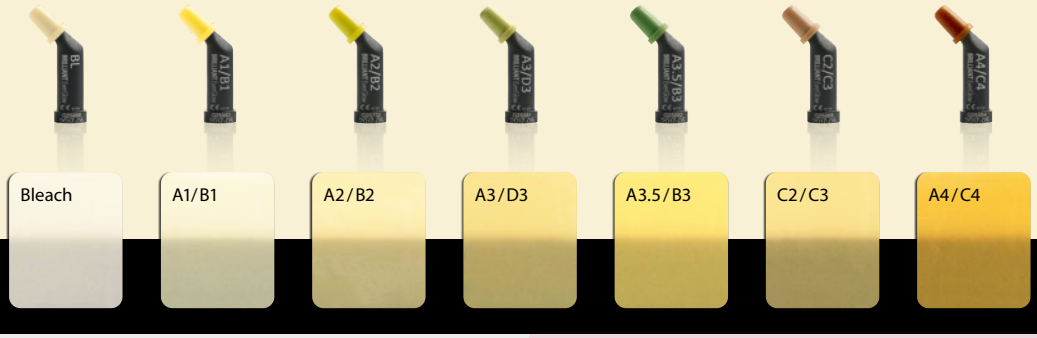
**Opaque shades:**
The masking ability is controlled by the thickness of the layer. To achieve an optimal blend-in effect, it is suggested to keep the total opaque shade layer thickness as small as possible and to cover it with universal shades.

For further information on colour management, please see “Questions and Answers”.

**HOW EASY!**
**Seven basic shades is all you need.**

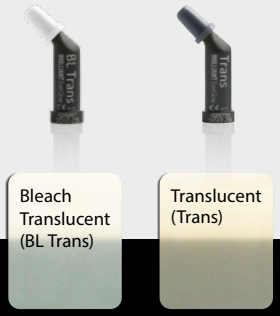
## UNIVERSAL

· aesthetic single shade restorations
· for anterior and posterior teeth



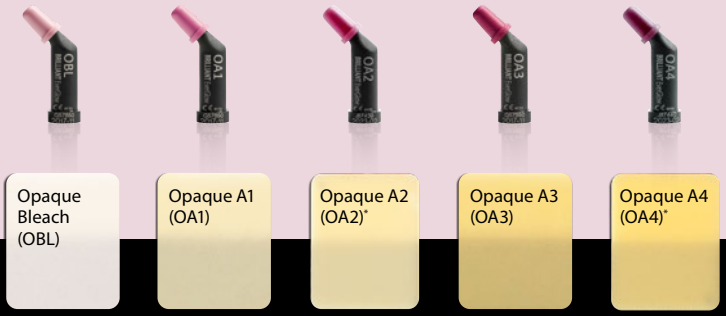

## TRANSLUCENT

· Enamel replacement
· Reconstruction of incisal edges




## OPAQUE

· Masking of discoloured teeth or dark areas
· Replacement of opaque tooth substance

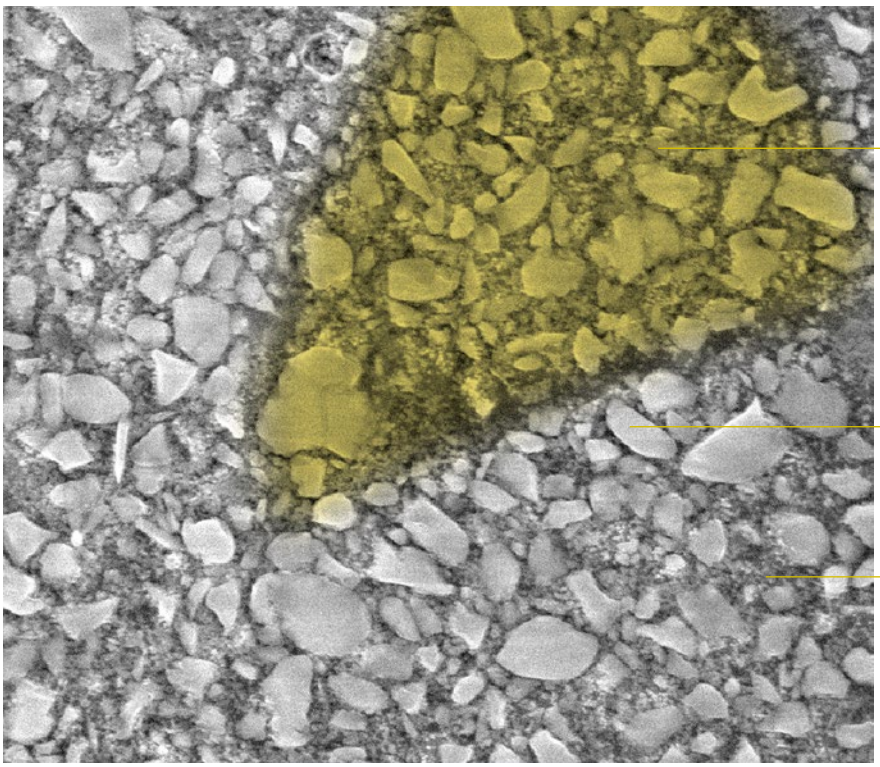



* This shade is available in all European countries. For all other markets, please check with local sales for the available product assortment and existing Kits.

# BRILLIANT EVERGLOW FILLER TECHNOLOGY

## BRILLIANT EVERGLOW IS A SUBMICRON HYBRID COMPOSITE OF THE LATEST GENERATION.

The average particle size of the dental glass filler has been reduced to below 1 micron to achieve maximum ease of polishability and gloss retention. This was also accomplished by the composition of the pre-polymerised fillers corresponding to that of the composite itself. In addition, anchoring of the fillers has been optimised to prevent the particles from becoming detached under abrasive conditions. The formulation has been adjusted without compromising either the good handling characteristics of the composite paste or the mechanical strength of the cured composite.




SEM image of BRILLIANT EverGlow after toothbrush abrasion
Source: internal data

# TECHNICAL DATA – BRILLIANT EVERGLOW

| Criterion | Method | Unit | Value** |
|---|---|---|---|
| Filler content by weight | – | Wt. % | 79 |
| Filler content by volume | – | Vol. % | 64 |
| Inorganic filler content by weight | – | Wt. % | 74 |
| Inorganic filler content by volume | – | Vol. % | 56 |
| Range of dimensions of inorganic filler particles | – | nm | 20–1500 |
| Flexural modulus | – | MPa | 8200 |
| Flexural strength | ISO 4049 | MPa | 117 |
| Compressive strength | internal method | MPa | 390 |
| Vickers hardness | internal method | $kg/mm^2$ | 55 |
| gloss retention after toothbrush abrasion | internal method | GU | 67 |
| Water absorption | ISO 4049 | $\mu g/mm^3$ | 15.1 |
| Water solubility | ISO 4049 | $\mu g/mm^3$ | < 0.1 |
| Polymerisation shrinkage Archimedes | ISO 17304 | % | 2.8 |
| Consistency Zwick | internal method | N | 18.0 |
| Stickiness to steel | internal method | N | 41 |
| Polymerisation depth | ISO 4049 | mm | 2.4 |
| Radiopacity | ISO 4049 | mm Al | 2.0 |
| Operating light resistance 60 s at 8,000 lx | ISO 4049 | – | pass |
| Operating light resistance at 20,000 lx | – | s | 50 |
| Opalescence | internal method | – | 21.0 |
| Colour stability UV, delta E | internal method | – | 0.76 |

Source: internal data

** Universal, translucent and opaque shades are identical in filler and resin composition. Therefore technical data are identical with the exception of optically influenced parameters such as depth of cure or operating light resistance.
The data above are typical data as measured on the universal shade A2/B2.

# TECHNICAL DATA – BRILLIANT EVERGLOW FLOW

Source: internal data

| Criterion | Method | Unit | Value** |
|---|---|---|---|
| Filler content by weight | – | Wt. % | 65 |
| Filler content by volume | – | Vol. % | 46 |
| Inorganic filler content by weight | – | Wt. % | 60 |
| Inorganic filler content by volume | – | Vol. % | 37 |
| Range of dimensions of inorganic filler particles | – | nm | 20–1500 |
| Flexural modulus | – | MPa | 4100 |
| Flexural strength | ISO 4049 | MPa | 96 |
| Compressive strength | internal method | MPa | 415 |
| gloss retention after toothbrush abrasion | internal method | GU | 77 |
| Water absorption | ISO 4049 | µg/mm$^3$ | 22.6 |
| Water solubility | ISO 4049 | µg/mm$^3$ | 2 |
| Polymerisation shrinkage Archimedes | ISO 17304 | % | 4.7 |
| Polymerisation depth | ISO 4049 | mm | 2.1 |
| Radiopacity | ISO 4049 | mm Al | 2.2 |
| Operating light resistance 60 s at 8,000 lx | ISO 4049 | – | pass |
| Operating light resistance at 20,000 lx | – | s | 35 |
| Opalescence | internal method | – | 14.9 |
| Colour stability UV, delta E | internal method | – | 1.41 |

** Universal, translucent and opaque shades are identical in filler and resin composition. Therefore technical data are identical with the exception of optically influenced parameters such as depth of cure or operating light resistance.
The data above are typical data as measured on the universal shade A2/B2.

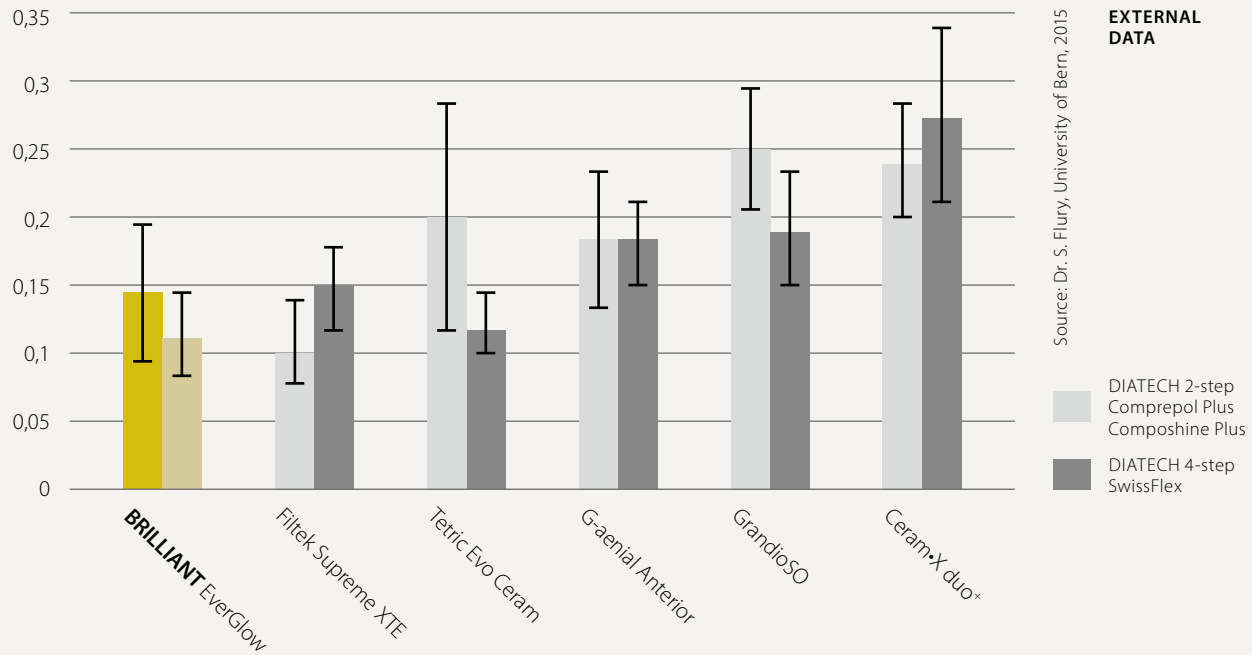
# POLISHABILITY

**Introduction:**
A low roughness value indicates that the composite is easy to polish and shows high gloss after polishing.

**Method:**
In this in vitro study, the surface roughness of 6 different composites (enamel shade A3 or an equivalent) was compared after polishing. Standard specimens were prepared in acrylic moulds, light-cured and ground to a baseline surface roughness with SiC 220 grit paper. Then 20 specimens per composite were polished. Two different polishing systems were tested: the 4-step DIATECH SwissFlex discs and the 2-step DIATECH Comprepol Plus/Composhine Plus rubber points. Each polishing step has been applied for 10 seconds. Surface roughness Ra and Rz of each sample was determined with a Mahr Perthometer S2 under 0°, 45° and 90° angle and averaged.

**Conclusion:**
BRILLIANT EverGlow and Filtek Supreme XTE show the lowest surface roughness after polishing. The two polishing systems lead to a comparable roughness level, but the polish quality with the 4-step SwissFlex discs is slightly more uniform.

## ROUGHNESS $R_a$ AFTER POLISHING / µm



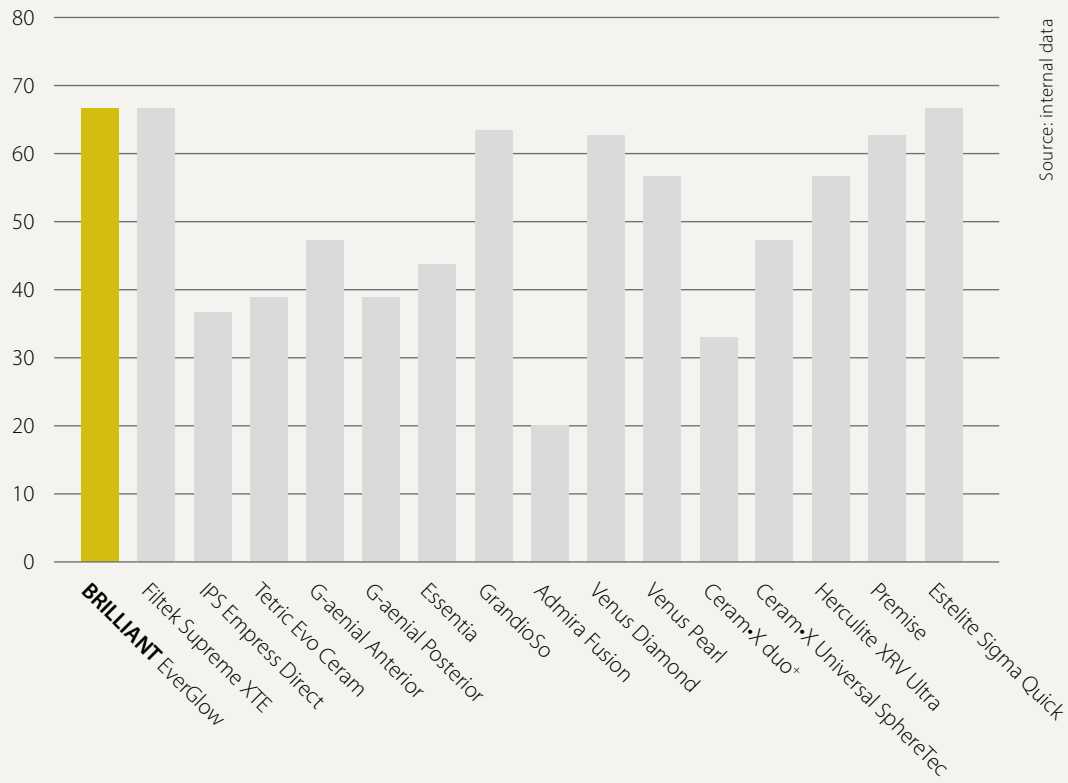
# GLOSS RETENTION

**Introduction:**
A high value indicates how well the good polish of the composite is preserved over time.
The higher the value, the glossier was the surface after tooth brushing simulation.

**Method:**
To measure gloss retention, a tooth brushing simulator was used allowing the testing of large numbers of specimens. The specimens were pressed and the surface layer ground off. In a first step they were mechanically polished with a Bühler EcoMet / AutoMet polisher and a diamond slurry to at least 95 GU. Then, in a second step, they were brushed according to a standardised tooth brushing procedure* (toothbrush Curaprox ultra soft 5460, tooth paste slurry with Elmex caries protection RDA75, loading 3.2 N, 6,000 cycles, zig-zag). Finally, residual gloss was analysed with a Zehntner gloss meter*.

**Conclusion:**
BRILLIANT EverGlow ranks among the composites with the best gloss retention.

## GLOSS AFTER TOOTH BRUSHING SIMULATION / GLOSS UNITS (GU)




*internal method

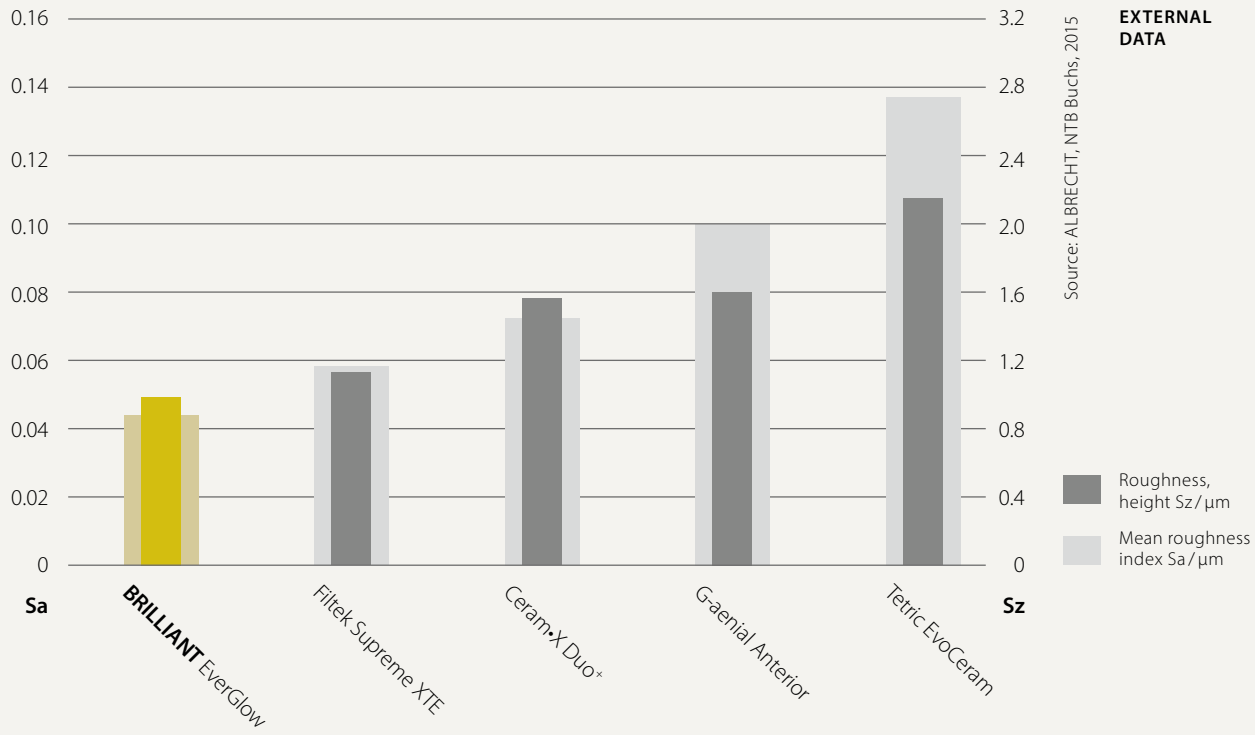
# ROUGHNESS AFTER TOOTHBRUSH ABRASION

**Introduction:**
This test result has the same background as the one for gloss retention. A low surface roughness is an indicator for high gloss retention.

**Method:**
Surface roughness of contemporary universal composites after a tooth brushing simulation was compared. The specimens were pressed in a mould and the surface layer was ground off in each case. The specimens were mechanically polished with a Bühler EcoMet / AutoMet Polisher and a diamond slurry to at least 95 GU. The specimens were then abraded in a tooth brushing simulator according to a standardized procedure* (toothbrush Curaprox ultra soft 5460, tooth paste slurry with Elmex caries protection RDA75, loading 3.2 N, 6,000 cycles, zig-zag) and finally analysed with white light interferometry.

**Conclusion:**
Among the tested samples, BRILLIANT EverGlow shows the lowest roughness after tooth brush abrasion.

## SURFACE ROUGHNESS AFTER TOOTH BRUSHING / µm






*internal method

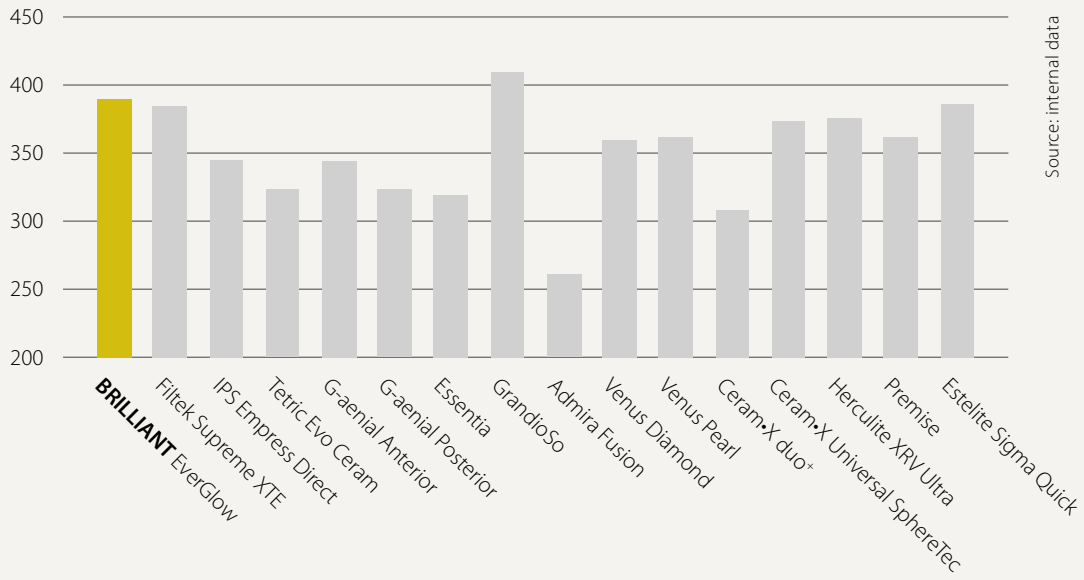
# COMPRESSIVE STRENGTH

**Introduction:**
Compressive strength gives an indication of how well a composite performs under a high single load as encountered when unexpectedly biting on a hard object.

**Method:**
The composites were pressed into cylindrical steel moulds (Ø 4 mm, h: 6 mm) and light-cured 60 s from each side. The cylindrical specimens were then demoulded and stored in deionised water at 37°C, 24 h before loading to compressive failure with the tensile testing machine*.

**Conclusion:**
BRILLIANT EverGlow shows a high compressive strength. It ranks in the follower group behind the best performing GrandioSo.

## COMPRESSIVE STRENGTH / MPa




*internal method

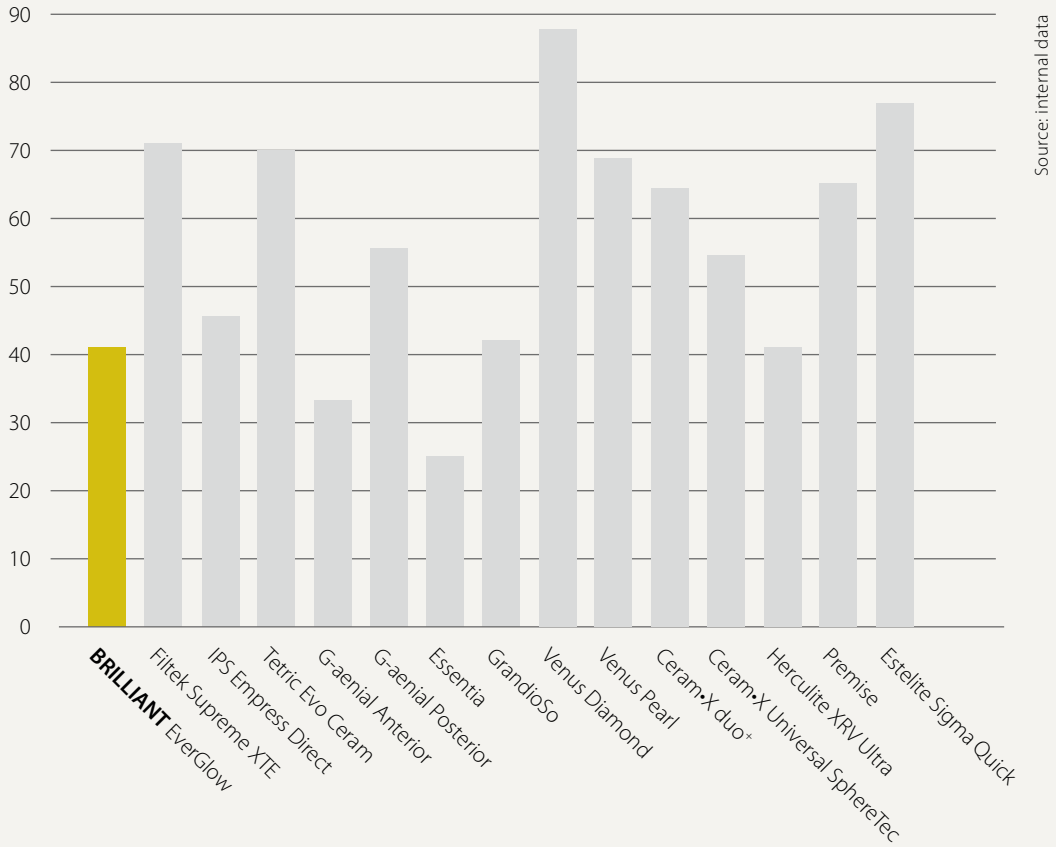
# STICKINESS OF THE COMPOSITE PASTE

**Introduction:**
To allow easy sculpting, it is essential for the material not to stick too much to the instrument. This test evaluates stickiness to stainless steel as a material often used for instruments.

**Method:**
For testing, a polished stainless steel rod was pushed onto the composite surface and pulled away quickly. The maximum pull off force is considered a good equivalent for perceived stickiness*. It was found that the various CVD (Chemical Vapour Deposition) surface coatings (TiC-silver, TiN-gold, AlTiN-black) of the instruments have minimum influence on the stickiness.

**Conclusion:**
BRILLIANT EverGlow ranks among the composites with the least stickiness to the tested instrument surfaces.

## STICKINESS OF THE COMPOSITE PASTE / N




Source: internal data

*internal method

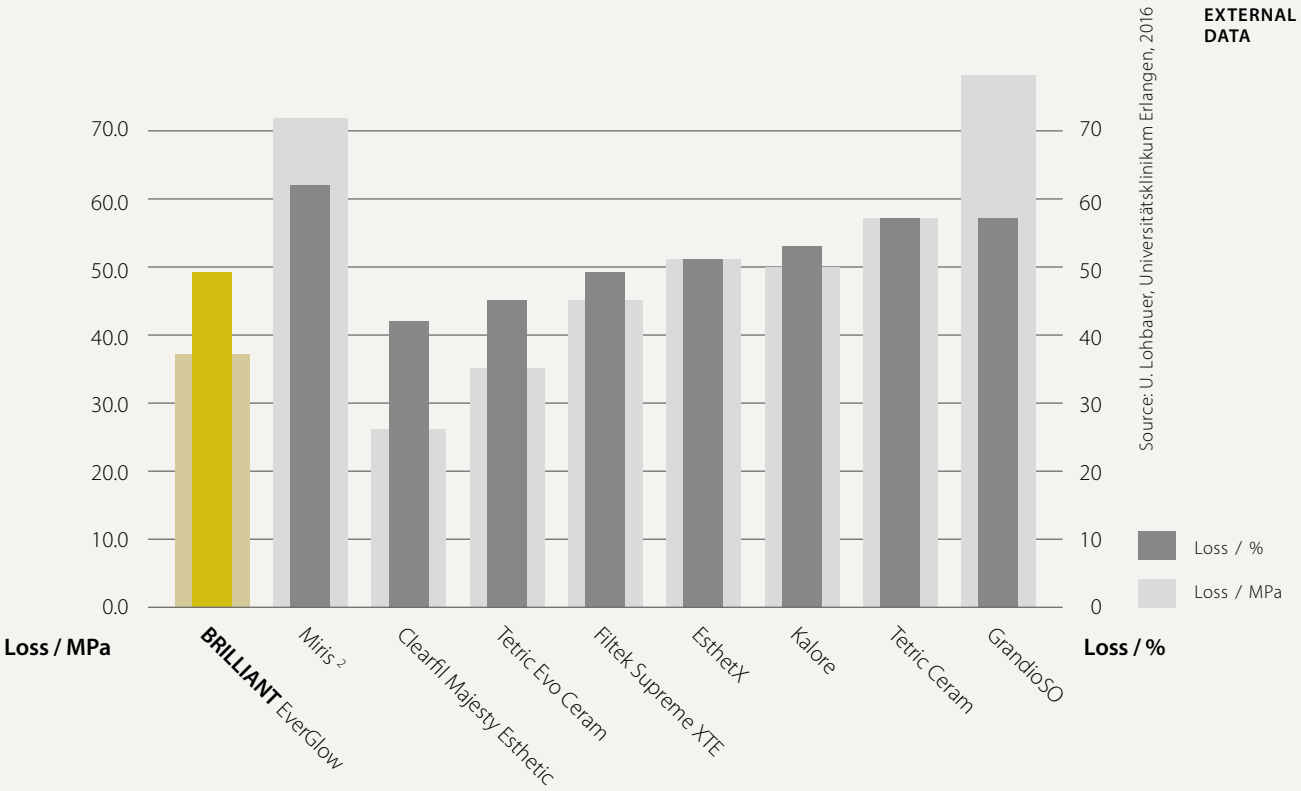
# FLEXURAL FATIGUE STRENGTH

**Introduction:**
The flexural fatigue strength is an indicator for the longevity of the composite.

**Method:**
Standard specimens for flexural testing were prepared according to ISO 4049 from various universal composites. The specimens were stored for 2 weeks at 37°C in deionised water in order to simulate intraoral conditions. Flexural strength (FS) was measured using the four point bending test at 37°C in deionised water. Flexural fatigue strength (FFS) was measured at 10,000 cycles following the staircase approach with 25 specimens tested sequentially. Cycling loading was done at a frequency of 0.5 Hz with an amplitude from 1 MPa to maximum stress. For the first specimen maximum stress was selected as 50% of FS, for the next specimen the maximum load was either increased or reduced depending on failure or survival of the previous specimen. For the test result, the difference between flexural strength and flexural fatigue strength was calculated.

**Conclusion:**
BRILLIANT EverGlow ranks in the middle of the field with a relative strength loss of about 50%. The absolute strength loss is low with 37 MPa only it can be concluded that BRILLIANT EverGlow is well suited for the use in load-bearing posterior restorations.

## LOSS OF FLEXURAL STRENGTH UNDER CYCLIC LOADING WITH 10,000 CYCLES



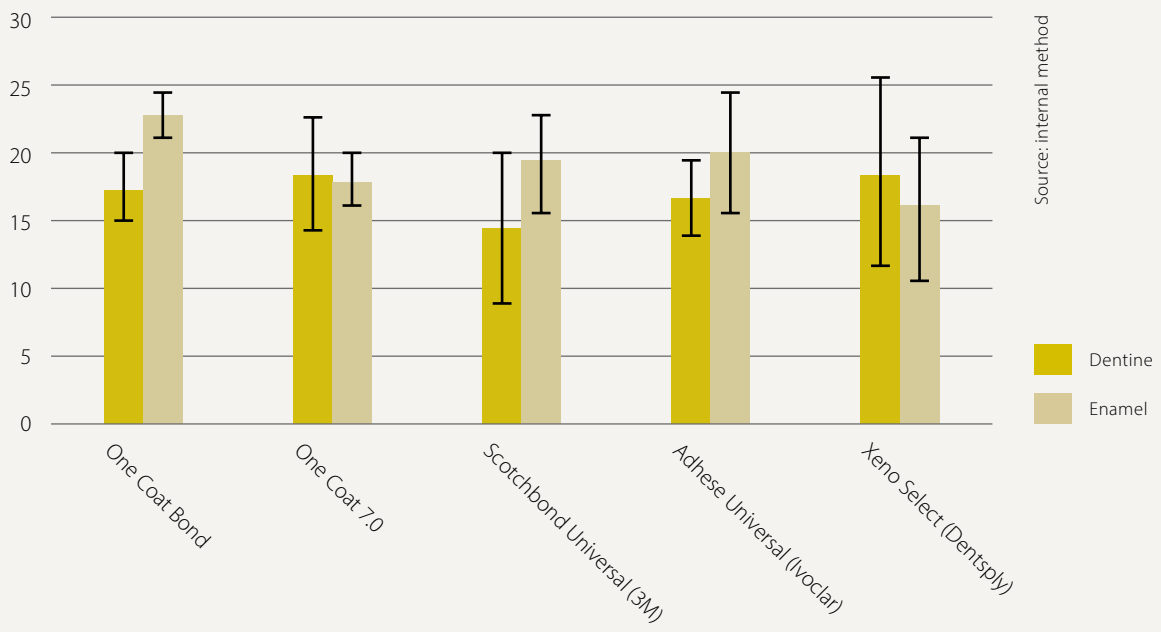
# BOND STRENGTH

**Introduction:**
Shear bond strength is mainly influenced by the bonding system. In this test, the shear bond strength of some contemporary adhesives in combination with BRILLIANT EverGlow was measured. The higher the value, the lower the risk of debonding.

**Method:**
BRILLIANT EverGlow's compatibility with bonding systems has been tested with shear bond strength measurements using the Watanabe method*.
· Substrate: human teeth ground for dentine;
  bovine teeth pumiced and etched for enamel
· Adhesive applied according to IFU
· Composite applied in 3 layers
· Composite light cured according to IFU
· Specimens were stored in deionised water at 37 °C for 24 h before testing

**Conclusion:**
BRILLIANT EverGlow is compatible with the adhesives tested, as values ≥ 15 MPa are considered as good. The standard deviation is an indicator for the technique sensitivity of each bonding system.

## SHEAR BOND STRENGTH / MPa






*internal method

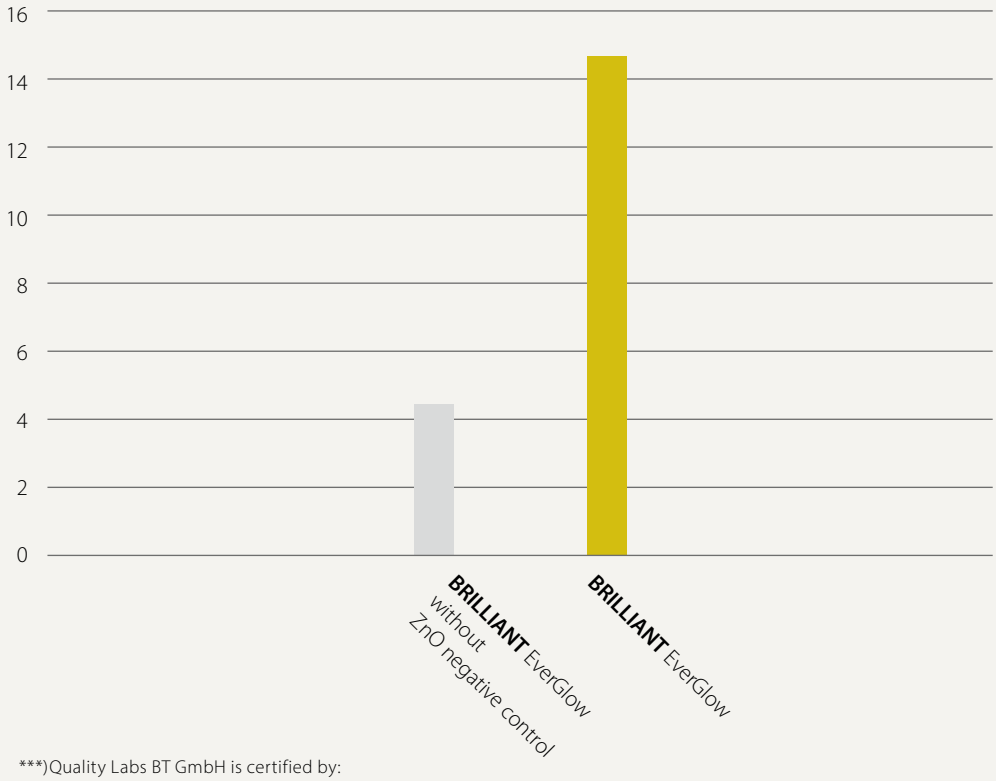
# ANTIBACTERIAL PROPERTIES

**Introduction:**
The test was conducted at Quality Labs BT GmbH, Nürnberg***) according to Quality Labs SOP3.2 from 2008-08-05 "Essay zur Bestimmung antimikrobieller Wirksamkeit von Werkstoffoberflächen gegen Staphylococcus epidermidis DSM 18857" ("Essay on the determination of antimicrobial efficacy of material surfaces against Staphylococcus epidermidis DSM 18857"). A material causing a delay of > 6 h over a relevant control specimen is defined to be antimicrobial.

**Method:**
Cylindrical cured composite specimens were incubated with cells of the testing stem. Non-adhering cell material was washed off. The composite was challenged to inhibit the proliferation of the bacteria on its surface over a period of 18 h at 37°C. If the inhibition was not complete, living daughter cells were released to the testing medium. The testing medium was cultivated and observed over 48 h and the onset of a critical impact on the medium was recorded. The higher the antimicrobial efficiency of the composite, the later the onset.

**Conclusion:**
The test shows a significant delay of the onset time of about 10 h versus the negative control. Under the limitations of this testing procedure, BRILLIANT EverGlow containing zinc oxide (ZnO) shows antimicrobial properties.

## PROLIFERATION INHIBITION TIME / h




Source: Quality Labs BT GmbH, Nürnberg

**EXTERNAL DATA**

***)Quality Labs BT GmbH is certified by:
- DAkkS, Deutsche Akkreditierungsstelle D-PL-13335-01-00
- SLG, Zentralstelle der Länder für Gesundheitsschutz bei Medizinprodukten [Central Authority of the Federal States for Health Protection in Medical Devices], SLG-AP-231.10.72

# BRILLIANT BULK FILL FLOW

## BRILLIANT BULK FILL FLOW

BRILLIANT Bulk Fill Flow is the ideal filling material for fast and easy restorations. Especially in the posterior tooth region, the colour-adapting shade and the possibility of working without a final covering layer facilitate placement of the filling. The Bulk Fill Flow, like the entire BRILLIANT family, is based on the successful BRILLIANT filling technology. This makes it the ideal partner for BRILLIANT EverGlow and BRILLIANT EverGlow Flow.

## FEATURES AT A GLANCE

· One adaptive Multi Shade material
· 4 mm reliable curing depth polymerized in 20 sec (≥ 1000 mW/cm$^2$)
· No top layer needed due to high abrasion resistance and good mechanical properties.

## INDICATIONS

BRILLIANT Bulk Fill Flow can be applied in 4 mm increments and is indicated for:
· direct restorations of all cavity classes
· luting and repair of composite and ceramic restorations
· luting of retainers

## SHADE SPECTRUM

BRILLIANT Bulk Fill Flow was developed as a Multi Shade composite. Owing to its chameleon effect, the material adapts to a wide range of tooth shades.
For further information on colour management, please see "Questions and Answers".

# TECHNICAL DATA – BRILLIANT BULK FILL FLOW

| Criterion | Method | Unit | Value |
|---|---|---|---|
| Filler content by weight | – | Wt. % | 61 |
| Filler content by volume | – | Vol. % | 47.5 |
| Inorganic filler content by weight | – | Wt. % | 56 |
| Inorganic filler content by volume | – | Vol. % | 38.5 |
| Range of dimensions of inorganic filler particles | – | nm | 20-5000 |
| Flexural modulus | – | MPa | 4660 |
| Flexural strength | ISO 4049 | MPa | 110 |
| Compressive strength | Internal method | MPa | 278 |
| Abrasion | Internal method | µm | 31.9 |
| gloss retention after toothbrush abrasion | Internal method | GU | 67 |
| Water absorption | ISO 4049 | µg/mm$^3$ | 17 |
| Water solubility | ISO 4049 | µg/mm$^3$ | < 0.1 |
| Polymerisation shrinkage Archimedes | ISO 17304 | % | 3.6 |
| Polymerisation depth | ISO 4049 | mm | 4.0 |
| Radiopacity | ISO 4049 | mm Al | 1.9 |
| Operating light resistance 60 s at 8,000 lx | ISO 4049 | – | pass |
| Operating light resistance at 20,000 lx | Internal method | s | 70 |
| Opalescence | Internal method | % | 22.1 |
| Colour stability UV, delta E | Internal method | – | 1.42 |

Source: internal data

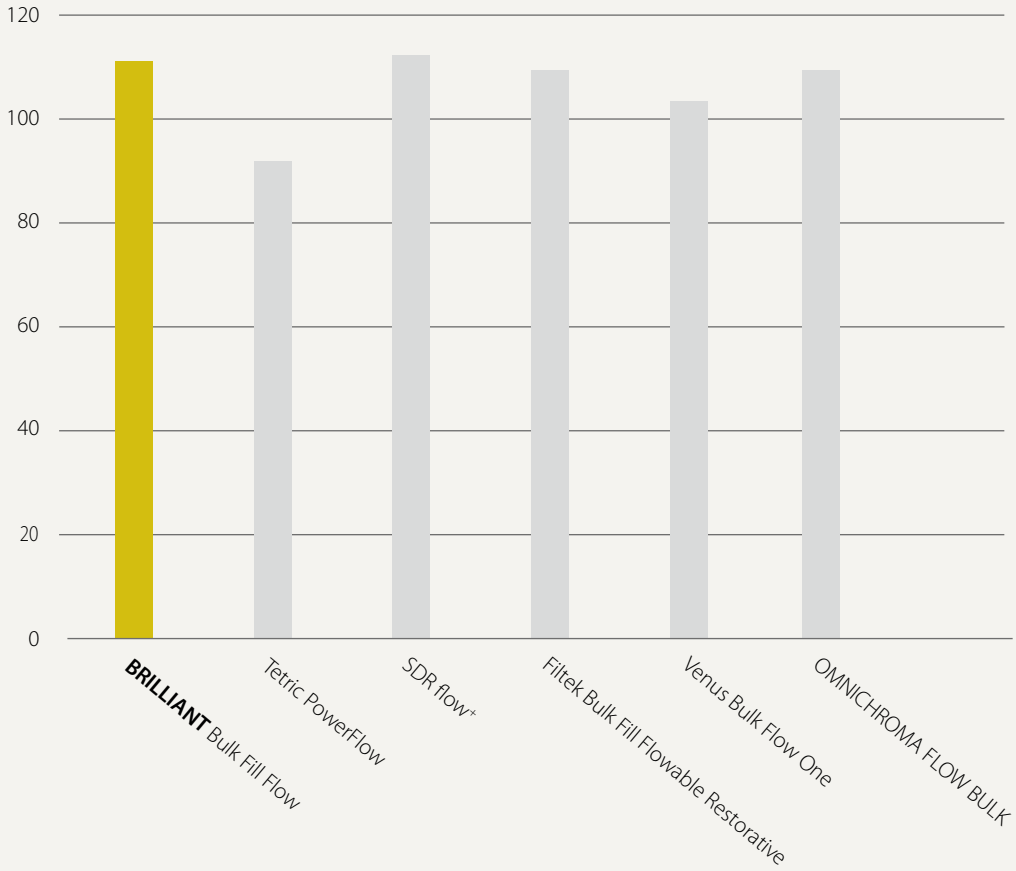
# FLEXURAL STRENGTH

**Introduction:**
The flexural strength indicates the maximum pressure until a composite specimen breaks. It is thus an indicator of the composite's resistance to deformation or cracking, for example when biting food.

**Method:**
The specimens are placed in deionised water at 37°C for 24 hours. Each specimen is then clamped in an ISO-certified testing machine and positioned on a beam at each of the two outer ends. Another beam now presses on the centre of the specimen from above. This pressure is continuously increased until the specimen breaks.

**Conclusion:**
Among the tested bulk composites, BRILLIANT Bulk Fill Flow is one of the materials with high flexural strength.

## FLEXURAL STRENGTH / MPA




Source: internal data

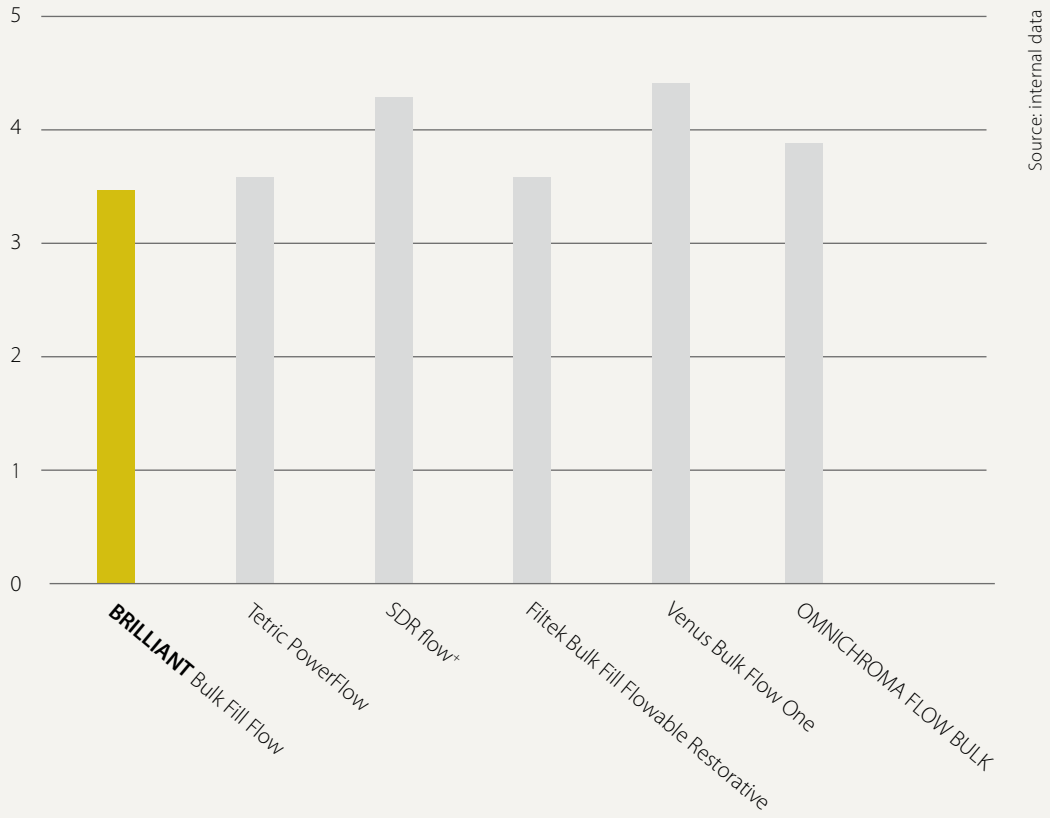
# SHRINKAGE

**Introduction:**
Shrinkage is a measured value which indicates how much the volume of a composite decreases during the polymerisation process. When the volume of the filling material decreases, the adhesive bond to the tooth can be subjected to stress. Consequently, low shrinkage is instrumental in reducing the risk of marginal gaps, enamel cracks or the debonding of fillings.

**Method:**
The measurement of shrinkage is based on the Archimedean principle and follows ISO 17304: defined specimens are prepared from the bulk composites and the volume is measured. After the material has cured, the volume of the specimens is determined again. The difference in volume is given as a percentage.

**Conclusion:**
BRILLIANT Bulk Fill Flow exhibits comparatively low shrinkage compared to competitor products.

## SHRINKAGE / %



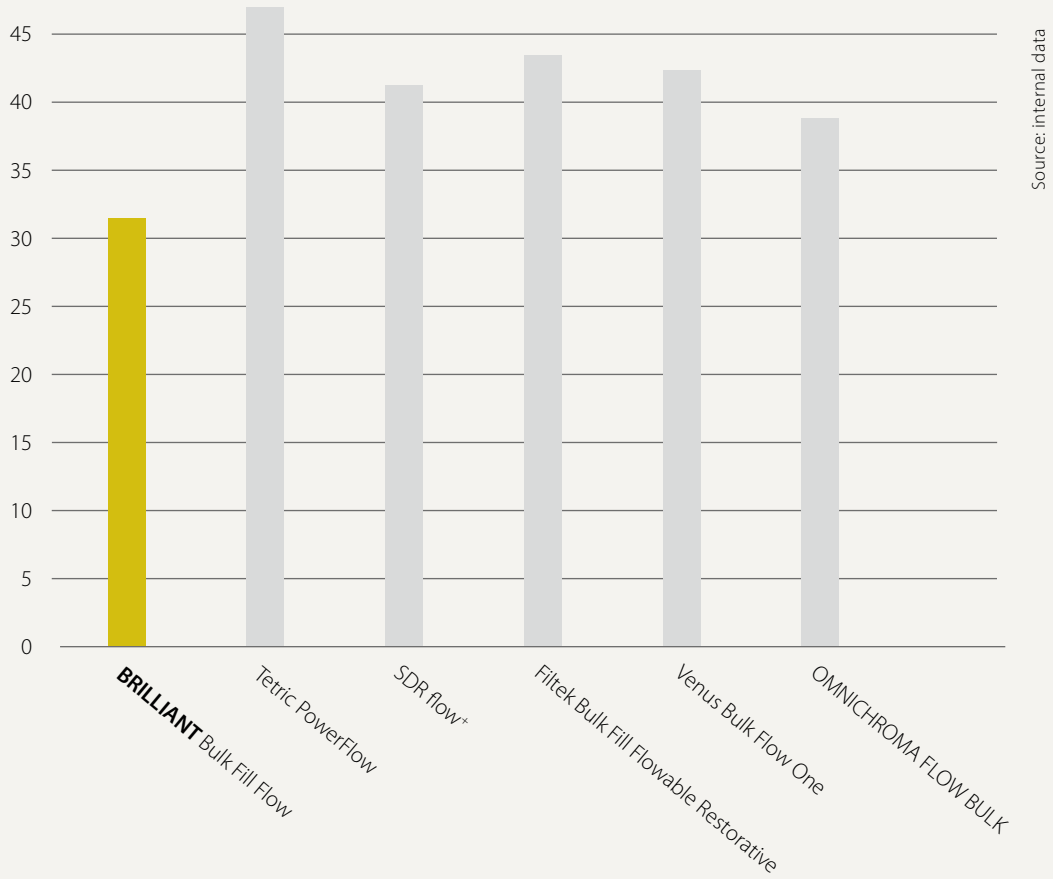
# ABRASION

**Introduction:**
Abrasion is an indicator for the longevity of a composite. The lower the value, the less material loss is shown on the surface of a filling during chewing or grinding.

**Method:**
Testing follows the McCabe measurement method: first, specimens are prepared for measuring abrasion. These are then weighed and placed in a housing lined with an abrasive foil. The container is then moved back and forth in the space with defined, rapid movements for one hour. Finally, the specimen is weighed again and the material loss of the specimen surface is calculated according to ISO 14569 (method: University of Freiburg).

**Conclusion:**
BRILLIANT Bulk Fill Flow exhibits the lowest abrasion-related material loss in the investigated material group.

## ABRASION / µm



# QUESTIONS AND ANSWERS

# QUESTIONS AND ANSWERS

## BRILLIANT EverGlow and BRILLIANT EverGlow Flow

**1. What is BRILLIANT EverGlow (Flow)?**

BRILLIANT EverGlow is a universal composite based on submicron hybrid filler technology. It is indicated for permanent direct restorations of all cavity classes and available in tips and syringes. BRILLIANT EverGlow Flow is the supplementing flowable submicron hybrid material and available in syringes and with two needle sizes.

**2. What makes the submicron filler technology so special? How does it distinguish itself from other composites on the market?**

BRILLIANT EverGlow (Flow) shows an outstanding polishability and gloss retention. The key to its performance lies in the submicron filler technology: the recipe comprises, on the one hand, very small (submicron) barium glass fillers, and on the other hand, pre-polymerised fillers that perfectly match the composite. In addition, an optimum surface treatment leads to best possible bonding strength. This results in a composite with excellent abrasion resistance and a long-lasting glossy surface.

**3. For which clinical situations is BRILLIANT EverGlow (Flow) indicated?**

As a universal composite, BRILLIANT EverGlow is indicated for all cavity classes and due to a high gloss retention especially suitable for anterior restorations. It is applied in the 2-mm increment technique. Furthermore, it is used to lute and repair composite and ceramic restorations. Thanks to its flowable consistency, BRILLIANT EverGlow Flow is suitable for various indications where the low viscous and thixotropic qualities of the material are an advantage: restoration of cavity Classes III to V, fillings of small cavities of all cavity classes, blocking out of undercuts, extended fissure sealing and cavity linings. The full range of indications for use of both materials can be found in the IFUs.

# QUESTIONS AND ANSWERS

**4. How should the BRILLIANT EverGlow shade spectrum be applied to achieve optimum aesthetics?**

The sophisticated shading system of BRILLIANT EverGlow allows for maximum flexibility in the dental practice. With only 7 universal shades, (≈21% of translucency) high aesthetic anterior and posterior restorations can be realised. Compared to the composites of the competition, the COLTENE shade system is one step ahead: the innovative Duo Shade system, which has been further perfected over the years, makes it possible to cover two VITA shades with only one universal shade, for example A1/B1 or A2/B2, due to its excellent blend-in properties.

Optional application of one of two translucent shades (≈ 27% translucency) allows shape and shade corrections to enhance individual aesthetics and the reconstruction of incisal edges.

Additionally, five opaque shades (≈ 13% of translucency) were developed as a base material to perform aesthetic corrections (e.g. chroma deviations), to mask dark areas and/or to form a dentine core. The opaque shade is applied in 1-mm layers and is covered by a matching universal shade.

Single-shade restorations in the anterior tooth region

Single-shade restorations in the posterior tooth region

Opaque shade + Universal shade

Universal shade + translucent covering layer

Opaque shade + Universal shade

Opaque shade + Universal shade + translucent covering layer

**5. What is the reason for BRILLIANT EverGlow (Flow)'s effortless polishability?**

It is thanks to the submicron fillers, that leave the restoration with a very homogenous and smooth surface.

**6. How does BRILLIANT EverGlow (Flow) achieve such a high gloss retention?**

Thanks to:

· minute (submicron) barium glass fillers

· pre-polymerised fillers with the same composition as the composite itself

· optimum silanisation of the filler component

* see page 6

# QUESTIONS AND ANSWERS

## BRILLIANT Bulk Fill Flow

**1. What is BRILLIANT Bulk Fill Flow and what makes it so special?**

BRILLIANT Bulk Fill Flow is a flowable composite material which allows the application of increments of up to 4 mm. It is available in a Multi Shade which adapts to a wide range of tooth shades through the integrated blend-in effect. BRILLIANT Bulk Fill Flow convinces with stable material characteristics, from flexural strength to shrinkage and depth of polymerisation. As no liner or covering layer needs to be applied, unlike with other competitive materials, it stands out through the simplicity of its workflow. It is therefore ideally suited for quick and simple restorations, especially in the posterior tooth region.

**2. How can a reliable curing depth of 4 mm be guaranteed?**

To be able to polymerise increments of up to 4 mm in one step, the ratios of the monomers among each other were further optimised for BRILLIANT Bulk Fill Flow. In the uncured state, translucency is high, so the polymerisation light can penetrate as deeply as possible. The curing process changes the refractive index and thus reduces the translucency of the material. As a result, the shade is finally optimised by the polymerisation process.

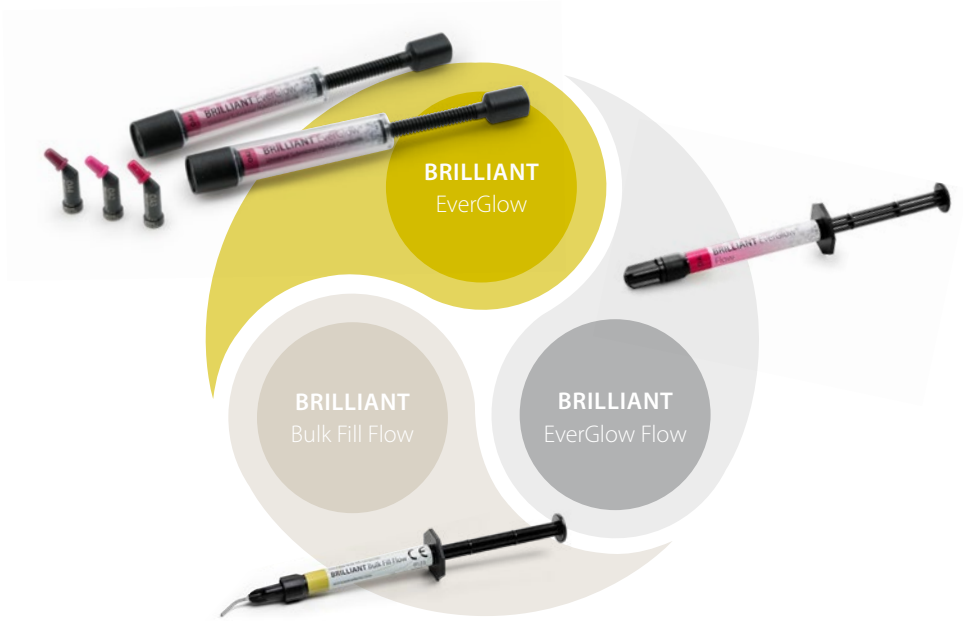
**3. For which clinical situations is BRILLIANT Bulk Fill Flow indicated?**

BRILLIANT Bulk Fill Flow is indicated as a filling material for all cavity classes and, owing to the time-saving workflow, is particularly suitable for restorations in the posterior tooth region. Further it is used to lute and repair composite and ceramic restorations. The flowable, low viscous consistency of BRILLIANT Bulk Fill Flow is also well suited for the following indications:
Restoration of Class III to V cavities, filling of small cavities of all classes, blocking out undercuts, extended fissure sealing, cavity linings and fixing of retainers. The full range of indications can be found in the IFU.

# QUESTIONS AND ANSWERS

## BRILLIANT Filling Materials

**1. What makes BRILLIANT Filling Materials so special?**
**How do they differ from other composite systems on the market?**
The BRILLIANT Filling Materials are based on the same basic formulation and filling technology. They can therefore be optimally combined with each other - both the shade spectra are in harmony with each other and adhesion of the increments to each other is ensured. BRILLIANT Bulk Fill Flow is ideal for quick and easy work, highly aesthetic restorations can be achieved with BRILLIANT EverGlow and BRILLIANT EverGlow Flow. The three materials thus complement each other for any composite restoration.




**2. How does the Duo Shade shade system of BRILLIANT EverGlow (Flow) differ from the Multi Shade concept of BRILLIANT Bulk Fill Flow?**
The innovative Duo Shade concept from COLTENE combines two VITA shades (e.g. A1 and B1) with each other in one shade (e.g. A1/B1). Due to the integrated optical properties, the material blends in harmoniously with its surroundings. With the Multi Shade system of BRILLIANT Bulk Fill Flow, COLTENE takes it one step further and offers a single shade which adapts to more than two VITA shades through its chameleon effect. With this technology, nothing stands in the way of quick and easy restorations.

**3. How does the blend-in effect of the BRILLIANT Filling Materials work?**
Due to optimal light scattering and light reflection as well as corresponding translucency, the shade of the composite visually matches the remaining natural tooth substance in the immediate vicinity. The composite filling harmoniously integrates into the tooth and preparation margins are virtually invisible.

**4. How can I combine the shades of the BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow shade systems?**

**Universal shades:**
Can be applied separately or in combination with opaque and/or translucent shades.

**Translucent shades:**
Can be applied separately or following the universal shade as a coating layer.

**Opaque shades:**
Masking intensity is regulated by the layer thickness. To achieve an optimal blend-in effect, it is suggested to keep the total opaque shade layer thickness as small as possible and to cover it with universal shades.

**Multi Shade:**
The BRILLIANT Bulk Fill Flow composite material aesthetically matches a wide range of VITA tooth shades. To provide a highly aesthetic result, a covering layer can be applied with BRILLIANT EverGlow in the respective matching BRILLIANT EverGlow Duo Shade.

The following table provides an overview of possible shade combinations.

| BRILLIANT EverGlow | | | | | | | | | | | | | | | BRILLIANT Bulk Fill Flow |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tooth shade (VITA) | Universal | | | | | | | Translucent | | Opaque | | | | | Multi Shade |
| | BL | A1/ B1 | A2/ B2 | A3/ D3 | A3.5/ B3 | C2/ C3 | A4/ C4 | BL Trans | Trans | OBL | OA1 | OA2 | OA3 | OA4 | |
| Bleach | ×× | | | | | | | ×× | | ×× | | | | | × |
| A1 | | ×× | | | | | | ×× | ×× | | ×× | × | | | × |
| A2 | | | ×× | | | | | × | ×× | | × | ×× | × | | × |
| A3 | | | | ×× | | | | × | ×× | | | × | ×× | | × |
| A3.5 | | | | | ×× | | | | ×× | | | | × | × | × |
| A4 | | | | | | | ×× | | ×× | | | | | ×× | × |
| B1 | | ×× | | | | | | ×× | ×× | × | × | | | | × |
| B2 | | | ×× | | | | | × | ×× | | × | × | | | × |
| B3 | | | | | ×× | | | × | ×× | | | × | × | | × |
| D3 | | | | ×× | | | | | ×× | | | | × | | × |
| C2 | | | | | | ×× | | | ×× | | | | × | | × |
| C3 | | | | | | ×× | | | ×× | | | | × | | × |
| C4 | | | | | | | ×× | | ×× | | | | | × | × |
| | Young / Bleached | | | | | | | | | | | | | | |
| | | | Adults | | | | | | | | | | | | |
| | | | | Elderly | | | | | | | | | | | |

× suitable
×× especially suitable

# QUESTIONS AND ANSWERS

**5. Can I combine BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow in one restoration?**

Yes. The three composite materials are based on the same filler technology and are thus optimally suited to be used together in one restoration. Here, attention must be paid to keeping the inhibition layer intact between the application and curing of the individual increments. To enhance the aesthetics or gloss retention of the restoration, BRILLIANT EverGlow can be applied as a covering layer over BRILLIANT Bulk Fill Flow.

**6. Why do BRILLIANT Filling Materials contain pre-polymerised fillers?**

They ensure:
· low polymerisation shrinkage
· good polishability
· reduced stickiness to the instrument

**7. Do the BRILLIANT Filling Materials contain Bisphenol A (BPA)?**

Although the formulation of BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow does not contain BPA, it does contain BPA derivatives such as Bis-GMA and Bis-EMA, which are widely used in state-of-the-art composites.

**8. With which adhesive system are the BRILLIANT Filling Materials compatible?**

BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow are compatible with established, commercially available adhesive systems:
· self-etch technique (e.g. One Coat Self-Etching Bond)
· total-etch technique (e.g. One Coat Bond)
· selective-etch technique (e.g. A.R.T. Bond)
· Universal bonds (e.g. ONE COAT 7 UNIVERSAL)
In case of a high enamel ratio, the total-etch technique is recommended. Please consult the manufacturer's IFU.

# QUESTIONS AND ANSWERS

### 9. How are BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow polymerised?

BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow are cured with a polymerisation lamp.

Maximum thickness of the layer and curing times:

| **BRILLIANT EverGlow** | **Max. layer thickness** | **Exposure time** | |
|---|---|---|---|
| | | ≥ 800 mW / cm² | ≥ 1600 mW / cm² |
| Universal and Translucent Shades | 2 mm | 20 s | 10 s |
| Opaque Shade | 1 mm | 20 s | 10 s |
| **BRILLIANT EverGlow Flow** | | | |
| Bleach, A1/B1, A2/B2, A3/D3, Translucent | 2 mm | 20 s | 10 s |
| A3.5/B3, A4/C4 | 1.5 mm | 20 s | 10 s |
| Opaque A2, Opaque A3 | 1 mm | 20 s | 10 s |
| **BRILLIANT Bulk Fill Flow** | | | |
| Multi Shade | 4 mm | 20 s | 20 s |

**Note:** BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow must be cured layer by layer. Do not remove the inhibition layer, since this would affect adhesion between the layers. In the event of underexposure, there is a risk of insufficient curing. BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow are light-sensitive. Therefore, avoid continuing exposure to strong light sources, especially surgical light and/or sunlight.

### 10. Which finishing systems are recommended for BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow?

COLTENE recommends the two-step diamond polishing system DIATECH Comprepol Plus and Composhine Plus. The former is used for contouring, the latter for high-gloss polishing. Alternatively, the KENDA Nobilis polishers can be used in the first step and the KENDA Maximus polishers in the second step. DIATECH separating strips and ROEKO abrasive and polishing strips are recommended for the interproximal area.

**NOW WATCH THE DIATECH SHAPEGUARD VIDEO**

**https://www.youtube.com/watch?v=-tE4Fe7HjkA**

### 11. How should BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow be stored?

BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow should be stored dry, at room temperature or in a refrigerator (at 4-23°C) and not exposed to direct sunlight.

### 12. Can effect colours be used together with BRILLIANT EverGlow (Flow)?

Yes, BRILLIANT EverGlow (Flow) and BRILLIANT Bulk Fill Flow are compatible with effect colours for composites, for example with the effect colours from MIRIS². With the effect colours of MIRIS², COLTENE offers four effect colours for the individual characterisation of composite restorations in the anterior and posterior tooth region: blue, gold, white and white opaque. The colours can be mixed, allowing additional individual colours to be achieved or brightened up by adding white.

# DIRECT RESTORATION WORKFLOW

## Isolate


## Preparation

DIATECH / Alpen

## Etch, Bond

ONE COAT 7 UNIVERSAL

Etchant Gel S

## Composite Filling

BRILLIANT EverGlow

BRILLIANT EverGlow Flow

BRILLIANT Bulk Fill Flow

## Light-curing

Coltolux Comfort

S.P.E.C. 3

## Finish

DIATECH / Alpen

HANEL

## Polishing

DIATECH / KENDA

DOWNLOAD THE PRODUCT BROCHURE

https://media.coltene.com/EN/GB/index/search/detail/1002499725?q=everglow&nk=DOC_BRO

NOW WATCH THE BRILLIANT BULK FILL FLOW VIDEO

https://www.youtube.com/watch?v=q2EYYKxrldErldE

NOW WATCH THE BRILLIANT EVERGLOW VIDEO

youtube.com/WATCH?V=EKYFP38YE_G



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