

# Bulk fill and universal composites - a clinical classification based on the Tetric family

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Recently, the Tetric family has undergone a comprehensive revamp. The proven bulk-fill materials Tetric EvoCeram BulkFill and Tetric EvoFlow BulkFill have been replaced. In addition, the light-curing process has been optimized and offers features that are unique on the market. With Tetric Prime, a new universal composite for anterior and posterior restorations has entered the market. This material is distinguished by its optimized and pleasant handling characteristics. The following article highlights the potential of the latest Tetric family on the basis of clinical cases.

<b>NEW Tetric Prime</b>	<b>Tetric EvoFlow</b>
Sculptable universal composite	Universal flowable composite
*Tetric Prime offers superior handling properties	
<b>Tetric Power Fill</b>	<b>Tetric PowerFlow</b>
Sculptable 4-mm composite for the posterior region	Flowable 4-mm composite for the posterior region



Universal composites are suitable for the largest range of indications in restorative dentistry. They can be used in the posterior region without restriction and they are also suitable for many anterior indications. The use of a composite specifically designed for anterior applications is only necessary in a limited number of cases and requires a great deal of experience and skill (and also luck, to be honest) to achieve a clinically relevant improvement over a universal composite.

It is therefore absolutely realistic to expect that you can get through your daily work using just one universal composite.

It is true that universal composites cover the widest range of indications, yet it would be desirable if the layering technique for the posterior region could be simplified. Universal composites match the natural teeth in terms of translucency, and they are available in a wide array of shades, including dark shades. Given these properties, they are limited to a thickness of 2 mm per increment. In contrast, bulk fill composites can be cured in increments of 4 mm. However, they are available in fewer shades and have a somewhat higher translucency than universal composites.

This means that an adequate shade match with the natural tooth structure may not be achieved in some cases. I consider this to be completely irrelevant for Class I and II restorations in the posterior region. Only in esthetically more sensitive cases, such as the replacement of a buccal wall or the reconstruction of an occlusal surface, may the use of a universal composite be again advantageous.

The data situation for bulk fill composites looks very good. There is currently no indication that bulk fill composites perform worse in clinical applications than conventional composites. Clinical studies comparing bulk fill and conventional composites have not found any differences between the two (van Dijken und Pallesen 2016, Yazici et al. 2017, Heck et al, 2018, Tardem et al 2019).

Bulk fill composites shorten the layering process. This is only one part of the treatment protocol; all the other parts (anaesthesia, preparation, etc) remain unchanged. The possibilities for saving time are therefore limited, but the part in which the restoration is vulnerable to contamination is simplified. The simplification made possible by the bulk fill technique brings a welcome advantage.

## Case 1: Class III and IV restored with Tetric Prime

The patient presented with a request to have the incisal edges of teeth 11 and 21 straightened and to replace the existing discoloured fillings on the mesial and distal aspects of these teeth (Fig. 1).



*Fig. 1 Existing restorations and habit-induced fractures at the incisal edges of the central incisors.*

The patient's history revealed that the fractures of the incisal edges were not related to function but were primarily caused by a habit.



*Fig. 2 Situation after removal of the restorations.*

Fig. 2 shows the teeth after removal of the existing fillings. Following selective enamel etching with phosphoric acid (Fig. 3) and application of a universal adhesive (Adhese Universal, Fig. 4), the anterior teeth were restored using Tetric Prime (Figs 5-7).



*Fig. 3 Selective enamel etching with phosphoric acid gel for 15 s*

These monochromatic restorations were fabricated using only one shade (A3.5 in this case). The Tetric Prime shades feature a translucency of 11.5%. This represents a good compromise between the translucency of the dentin and enamel, allowing most restorations to be placed without layers of various shades. If a more opaque (i.e. less translucent) layer in the anterior region or masking of discoloured dentin is required, the A2 and A3.5 shades are offered in a dentin version that features a significantly reduced translucency of only 7.5%.

I find the new Tetric Prime very pleasant to work with, as it is soft and easy to contour. Technically, a universal composite such as the Tetric Prime presented here is sufficient to meet the requirements of everyday restorative work with just one composite. Since the introduction of bulk fill composites, however, it has become possible to simplify certain applications without lowering the quality of the work.



*Fig. 4 Active application of the universal adhesive (Adhese Universal) for 20 s.*



*Fig. 5 Restoring the proximal cavities and incisal edges step by step using Tetric Prime A3.5.*



*Fig. 6 Situation immediately after the treatment. Typically, the restorations appear to be too dark and translucent immediately after the treatment because the tooth structure has become desiccated and therefore looks brighter than it normally would.*



*Fig. 7 Completed restoration with rehydrated tooth structure. The transitions between the tooth structure and restoration are only noticeable under significant magnification and they are clinically irrelevant.*



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Dr Markus Lenhard started his career as scientific fellow at the Department of Restorative Dentistry and Periodontology of the University of Heidelberg, Germany, in 1992. Later, he headed the ICDE clinical at the headquarters of Ivoclar Vivadent AG in Liechtenstein. Since 2003 he has been working as a dentist in private dental practice in Switzerland.

Dr Lenhard is member of the Editorial Board of the International Journal of Esthetic Dentistry and a member of the Scientific Board of the Scandinavian Academy of Esthetic Dentistry. He has held more than 800 lectures and training courses in 50 countries around the world.

Being a full time practitioner in a private dental practice, Dr Lenhard focuses his lectures on improving the techniques and skills that are indispensable in everyday dentistry

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