

Establishing Bulk Fill Composite in Your Direct Restorative Procedure

By Dr Jeff Blank, USA

Over the last decade, the science and technology of composite materials have been advancing at a rapid rate. Today's materials help me perform better dentistry and allow me to do it more efficiently than ever, which is extremely important for my busy practice. Like a majority of dentists, a large part of my day is spent doing composite dentistry, so I need products that work quickly.

The products I have in my armamentarium were chosen carefully and were chosen based on significant research. I don't want to use something on a patient that could cause issues later just because I didn't do my due diligence.

With my current mix of materials and products, I can perform procedures that I wouldn't have attempted years ago, or at least would have struggled through!

The Advancement of Bulk Fills

There has long been a quest for a "white amalgam" in dentistry. Many dentists like to use amalgam because it's easy to place and can last extremely long, but patients don't like it because it doesn't offer the esthetics of a composite. In the early 90's, bulk fill composites began entering the market, but in my opinion, the properties of these materials were not up to par.

Today's bulk fill materials have evolved to provide clinicians a fast and easy option for deep caries and take away the tedious work required for incremental layering. With these advancements, the likelihood of voids can be reduced, and the amount of shrinkage can be reduced, which makes bulk fill composites very appealing to me.

My go-to bulk fill is Filtek™ Bulk Fill Posterior Restorative, and I can honestly say it's been a game changer in my practice. This material works exactly as it says it should; I can place

up to 5mm increments and feel confident in a full cure. Research done by Oregon Health and Science University has shown the material's excellent cure capabilities and validates an optimized curing protocol.

The Introduction of Workflows

A large part of how I choose products is through research, but it's also based on how well they fit into a specific product workflow. I look for products that work together and provide synergies throughout the workflow. Recently, I've been using a set of products from 3M for my direct restorations that provide improved efficiency.

My go-to adhesive is Single Bond Universal Adhesive, which truly is universal and can be used in all three etch-modes. The adhesive's properties provide a strong bond and give me virtually no post-op sensitivity. I use Filtek Bulk Fill Posterior for my deep restorations, as I can place one increment up to 5mm. I don't need to use an additional capping layer, as the composite has excellent wear resistance.

I recently began using the Elipar™ DeepCure-S LED Curing Light and have achieved a reliable light curing procedure. For finishing and polishing a restoration, my favorite product is the Sof-Lex™ Spiral Finishing and Polishing Wheels. This two-step system features a unique, flexible shape that adapts to irregular, convex and concave tooth surfaces, making finishing and polishing easier.

With these products, I am able to improve productivity, while saving valuable chair-time. I can perform direct restorations with speed and simplicity.

Case Study

The patient was in her mid-twenties and had deep distal-lingual caries on teeth #13 and #14. Due to limited financial resources, a crown was

Step 1

Initial access was made on tooth #13 (Fig. 1). Upon initial access, the extent of the decay became clear, and additional decay was removed to create the final preparation of 5mm. The preparation was then selectively etched (Fig. 2) (Scotchbond™ Universal Etchant), and after 15 seconds the etchant gel was rinsed off and dried.



Fig. 1



Fig. 2

Step 2

Single Bond Universal Adhesive was applied to the preparation and scrubbed for 20 seconds (Fig. 3). The adhesive was then air dried for 5 seconds and light cured 10 for seconds.



Fig. 3

not an option, so a direct procedure was chosen. Given the results I had been experiencing with bulk fills, I thought this would be a good option in this situation. These photos catalogue the procedure completed on tooth #13, but the exact same treatment was done on #14 immediately following.

Step 3

Filtek Bulk Fill Posterior was then placed in the preparation up to 5mm (Fig. 4). Tip of the composite was placed in the interproximal box and slowly raised while material was dispensed (Fig. 5). The composite was packed with an instrument to adapt to the preparation wall and floor (Fig. 6). The composite was then light cured.



Fig. 4



Fig. 5



Fig. 6

Please see Instructions for Use for additional information, including curing protocols. [DT](#)

Step 4

Initial contouring was completed with a diamond bur to blend the composite with the surrounding dentition (Fig. 7). Sof-Lex™ Spiral Finishing and Polishing wheels were then used. The beige wheel removed initial surface scratches (Fig. 8) and the white wheel provided a final polish (Fig. 9). The final restoration was completed (Fig. 10).



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Dr. Jeff Blank, USA

He has graduated from the Medical University of South Carolina, College of Dental Medicine in 1989 and maintains a full-time private practice at the Carolina Smile Center in Fort Mill, South Carolina. He is the founder of New Millennium Education, which offers personalized mentoring programs for those seeking to advance their skills in esthetic and complex restorative dentistry. He has lectured extensively both domestically and abroad since 1998, published numerous clinical manuscripts and dental research, and is a Fellow and active member of numerous dental societies. For questions, comments, or to arrange for Dr. Blank to speak at your upcoming local, regional or national dental program, he can be reached at jblank@comporium.net or by visiting www.newmillenniumedu.com and www.carolinasmilecenter.com.

3M Oral Care at 37th International Dental Show

By 3M

On 21-25 March 3M Oral Care participated in one of the leading trade fairs of the dental industry - IDS 2017, Cologne. During the five days of the show the booth was visited by the large number of doctors of various specializations coming from various countries from all across the globe.

The main theme of the booth was dedicated to 'Science. Applied to Life' concept and dentists could get acquainted with the new products and technologies in various dedicated areas. In the Direct Procedure section Esthetic and Efficient procedures with Filtek™ nano-composite restorative materials were presented and using the patient MARC simulator the technique of polymerization was demonstrated. In the Indirect Procedure section the main parts

of the Success Simplified procedure were demonstrated to show the benefits of precision impression materials, various range of cements and temporization materials. In the Orthodontic and Preventive section doctors could learn more about the Esthetic solutions with Clarity™ Advanced ceramic brackets complemented with APC Flash Free adhesive coated appliance system, as well as visit hands-on sessions on Clinpro™ Preventive procedure. The Digital area was equipped with mobile 3M True Definition scanners with a typodont next to them allowing to carry our demonstration of the scanning process.

A lot of visitors were attracted to the hands-on section in the middle of the booth equipped with the big screen where the key opinion leaders were carrying out the series of master-classes. Such specialists as Dr. Carlos Sabrosa shared "Tips and tricks



3M Booth at IDS Cologne 2017

in temporization', Dr. Jordi Manauta and Dr. Giuseppe Chiodera from the Style Italiano group presented 'Styleitaliano anterior recipe live!' and 'Styleitaliano Bulk & Go recipe live!' technique, Paulo Monteiro

demonstrated "Tips & Tricks in polishing indirect restorations". In the Virtual Reality area, specially equipped with the VR helmets and monitors, visitors had a unique chance to get exciting experience

watching the computer-generated simulation of Direct and Indirect Procedures in a three-dimensional image.

And in the dedicated corner doctors could learn more about the Gray Market issue, why they should pay attention to this topic, which problems can be caused by using gray market products, how to ensure buying products from 3M authorized distribution channels to prevent Gray Market and Counterfeit Product Risks.

And after the busy day visitors could relax in a comfortable lounge meeting their colleagues from various countries and having discussions on the new products and technologies.

To learn more about 3M Oral Care please visit: www.3MGulf.com/espe [DT](#)