Posterior Quadrant Restoration with a Single Shade Composite

Dr. Murad Akhundov

Direct posterior composite restorations remain one of the most common procedures in modern dental practice, offering patients durable, esthetic, and cost-effective solutions. With continuous advances in dental materials, clinicians today benefit from techniques that are faster, more predictable, and longer-lasting than ever before. Among these innovations, bulk-fill composites have transformed posterior restorations. Available in both flowable and paste viscosities, they simplify placement, reduce chair time, and maintain excellent biological integration. Their versatility allows clinicians to adapt the material to cavity design while ensuring optimal esthetic and functional outcomes. This article highlights a practical approach to restoring Class II posterior cavities using one shade bulk-fill composites of varying viscosities, demonstrating how efficiency and reliability can be achieved without compromising quality.

About Dr. Murad Akhundov

Dr. Murad Akhundov graduated from the Faculty of Dentistry in Baku, Azerbaijan. In 2013 won Pisa Master Course Contest provided by Style Italiano. Limited practice to direct and indirect Aesthetic restoration Since 2013 he is an active member and lecturer in Dental Academy Baku and IMPERIO group. Author of several articles in international journals. More than 20 times winner of best post of the week in StyleItaliano Facebook group.

Fig. 1 - Initial situation. The patient presented with multiple carious lesions in the upper posterior quadrant, accompanied by old defective composite restorations.

Fig. 2 - Occlusion. Occlusion should always be recorded prior to each case in order to respect the patient's occlusal contacts.

Fig. 3 - Cavity preparation. The cavities were opened by carefully removing the old defective composite restorations, which not only eliminated compromised material but also provided clear access to the underlying carious lesion for thorough debridement.

Fig. 4 - Rubber dam placement. Final cavity preparation was completed and rubber dam isolation executed, ensuring total removal of carious tissue. Contact points were opened to eliminate residual decay and to facilitate proper placement of the matrix system.

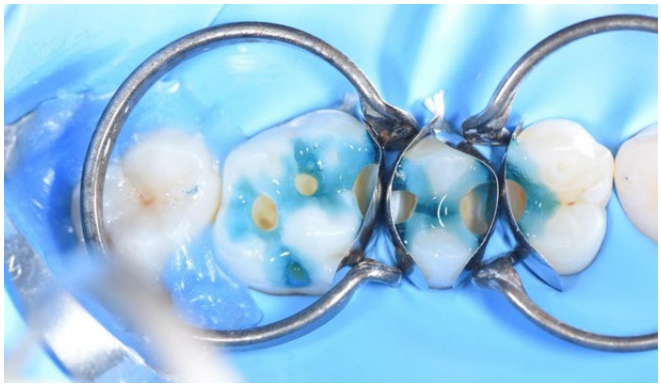

Fig. 5 - Matrix and selective etching. Two matrices were placed on opposing Class II cavities. One matrix will be removed after completing the composite wall to ensure a proper contact point with the adjacent tooth. A 37% phosphoric acid solution was then selectively applied to the enamel for 30 seconds, achieving optimal etching before bonding.

Fig. 6 - Bonding. A universal bonding agent (OptiBond™ Universal 360, Kerr) was applied to both enamel and dentin, gently agitated for 15 seconds to enhance adhesion. The surface was then air-dried for 10 seconds to effectively evaporate the solvent.

Fig. 7 - Shiny bonded surface. After applying the bonding agent and evaporating the solvent, the surface should appear shiny, confirming that the hybrid layer has been properly formed. Teflon was placed between the ring and the matrix to ensure the adaptation of the matrix on the tooth.

Fig. 8 - Sealing the dentine. Following cavity preparation, SimpliShade™ Bulk Fill Flow (Kerr) was applied to seal the dentin and reinforce the hybrid layer. The material was carefully spread across the surface to ensure complete coverage, then light-cured according to manufacturer instructions. This step provided a strong foundation for subsequent composite layering and enhanced adhesion.

Fig. 9 - Building the walls. The walls of all Class II restorations were built using SimpliShade Bulk Fill (Kerr), a low-stress, single-shade composite paste. The quality of the contact points is evident, and with the walls completed, the cavities were effectively transformed into Class I preparations, ready for final restoration.

Fig. 10 - Restorations and Stains. Final restorations were completed with SimpliShade Bulk Fill paste which is only one shade, and the occlusal anatomy was meticulously modelled using the Espresso Posterior technique. To enhance depth and natural esthetics, fissures were characterized with stains, producing a lifelike three-dimensional effect.

Fig. 11 - Final restoration. The final restorations demonstrated excellent shade integration, blending seamlessly with the natural tooth structure. The composite adapted beautifully to the surrounding enamel and dentin, creating a lifelike appearance that preserved harmony within the smile. Beyond esthetics, the restorations maintained proper occlusal anatomy and contact points, ensuring both functional efficiency and long-term stability.

Fig. 12 - Before and After. The upper jaw before and after treatment.

Conclusion

This clinical case highlights the effectiveness of one shade modern bulk-fill in achieving restorations that are both esthetically harmonious and functionally durable. Through careful isolation, precise cavity preparation, and meticulous reproduction of occlusal anatomy, the restorations blended seamlessly with the natural dentition, ensuring proper contact points and long-term stability. The integration of selective etching, controlled bonding protocols, and characterization with fissure staining further enhanced the natural appearance, creating a lifelike three-dimensional effect. Altogether, the workflow demonstrates how contemporary materials and techniques can simplify restorative procedures while delivering results that respect both biology and esthetics.

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Disclosure: Dr. Murad Akhundov is a consultant for Kerr. The opinions and technique expressed in this article are based on the experience of Dr. Murad Akhundov. Kerr is a medical device manufacturer and does not dispense medical advice. Clinicians should use their own professional judgment in treating their patients