



Ron Kaminer, DDS

Private Practice, Hewlett and Oceanside, New York

Sustainable caries prevention—Beautifil Flow Plus X contains Giomer technology, which releases and recharges six ions, including fluoride, that are beneficial for high-caries patients. Featuring high flexural strength and patented 400-nm S-PRG filler particles, this material provides sustainable caries prevention, inhibits plaque formation, and minimizes postoperative hypersensitivity.

High esthetics—Nano S-PRG fillers facilitate ease of handling and extreme polishability, offering a sustainable, long-lasting luster for highly esthetic results.

Flowable hybrid bioactive restorative—Available in two viscosities, zero flow (F00) and low flow (F03), Beautifil Flow Plus X is ideal for an assortment of restorative procedures, reducing chairtime, increasing productivity, and positively influencing the oral environment.

Bioactive Composite Used to Effectively Treat Carious White-Spot Lesion

Areas of enamel demineralization, commonly termed “white-spot lesions,” are frequently caused by a build-up of bacterial plaque. They often are a drawback of fixed orthodontic appliances and may appear within a month after placement. The presence of orthodontic appliances makes oral hygiene maintenance challenging, with hard-to-reach tooth surfaces often being especially problematic. This can lead to an increased likelihood of caries development that may be at risk for cavitation. Although Class V caries is commonly encountered in a restorative dental practice, predictable placement of a Class V restoration can be difficult. A significant challenge is the contraction of composite after light-curing, which can cause microleakage and staining, leading to cariogenic bacteria, postoperative sensitivity, and secondary caries. Another obstacle dentists face is choosing the optimal material for high-risk caries patients; ideally, it should be easy to work with and capable of handling the high flexure of the tooth surface area, yet still be esthetically pleasing. This case demonstrates the use of Beautifil Flow Plus® X (Shofu, shofu.com), a bioactive restorative material that releases and recharges beneficial ions to help protect restorations that are susceptible to recurrent caries and restorative failure.



FIG 1.



FIG 2.



FIG 3.



FIG 4.

Fig 1. A new patient presented with a white-spot demineralized lesion from an orthodontic bracket on tooth No. 14 that had become cavitated; once cavitated, a white-spot lesion, or enamel demineralization, needs to be restored with either resin-modified glass ionomer or composite. A bioactive composite material, Beautifil Flow Plus X, was chosen to restore this tooth to prevent further deterioration to the tooth structure and maintain an esthetic appearance. **Fig 2.** Access to a buccal lesion on tooth No. 14 can be challenging, so a flowable composite was well-suited due to ease of placement. The existing decay was removed using a 330 carbide bur (NeoBurr Carbide, Microcopy, microcopydental.com). The buccal surface of the tooth was beveled 2 mm on all sides (occlusal margin, mesial, distal, and cervical) using a flame-shaped diamond (NeoDiamond Burs, Microcopy), as shown, to create a gradual transition between the tooth structure and restorative material and to enhance retention to prevent microleakage. **Fig 3.** After the bevel was completed, the preparation was selectively etched at the periphery of the enamel using 35% phosphoric acid (Ultra-Etch™, Ultradent Products, Inc, ultradent.com) for 15 seconds and rinsed with water. **Fig 4.** The enamel was air-dried, then a universal bonding agent (BeautiBond®, Shofu) was placed on both the enamel and dentin using a microbrush for 10 seconds, as shown. The bonding agent was gently air-dried for 3 seconds then air-dried with more force, and light-cured for 5 seconds with a light-emitting diode (LED) curing light. BeautiBond delivers a secure bond with a *low film thickness of 5 µm*, eliminating marginal stain lines.

MY FINEST CASE



FIG 5.

Fig 5. Beautifil Flow Plus X (F00, shade A2), a highly viscous injectable hybrid composite, was syringed directly into the preparation to the cavosurface margin. This flowable, bubble-free, self-leveling composite allows for precision stacking that will not spill out of the preparation, which is particularly important when working on the buccal surface. **Fig 6.** This photograph shows the final restoration after being light-cured with an LED curing light for 20 seconds, and before polishing. **Fig 7.** The restoration was efficiently contoured, finished, and polished using an 8-mm polishing disc system (Super-Snap X-Treme™ Ultra-Gloss Performance Kit, Shofu). The restorative material blended beautifully with the surrounding tooth surface, and an exceptionally high luster was attained.



FIG 6.



FIG 7.