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PREMIER DENTAL PRODUCTS

CompCore AF

Dual-curing, automix composite core buildup material is stackable yet flowable to quickly and easily fill up missing tooth structure

Core buildup must fulfill several fundamental roles during a restorative procedure: replace missing tooth structure; create optimal geometry for the restoration; and protect the integrity of the tooth. But clinicians also should demand more from their core buildup material. First, it should possess significant compressive and tensile strength to withstand many years of multidirectional forces. And—to help make clinicians' day-to-day restorative procedures considerably easier—the material should be simple to place, flow easily, and cut like dentin, while offering a high depth of cure. Along with its ability to replace tooth structure prior to a restoration, Premier Dental's CompCore AF offers clinicians a trio of chairside benefits that set it apart from other core materials: ideal handling, simple delivery, and a unique dual-cure. By being easy to place, shape, and finish, CompCore AF allows clinicians to quickly fill up missing tooth structure and get to the preparation phase much faster.



Hyperbranched Technology

A unique and exclusive science called Hyperbranched Technology works behind the scenes to give CompCore AF its high strength and desirable physical properties. This technology, combined with the use of nanofillers, creates a branching of internal monomers to polymers.

"Hyperbranched Technology is essentially a polymer performance enhancer," said Dr. Jason Goodchild, Vice President of Clinical Affairs at Premier Dental, where he is heavily involved in developing innovative dental products and educating dentists on improving clinical practice. "So, from a chemistry standpoint, it helps the composite resin polymerize more completely and, in the process, mitigates shrinkage stresses."

Another benefit of Hyperbranched Technology, he shared, is CompCore's ability to match dentin's hardness. This allows the material to cut like dentin during preparations. "As clinicians move around the tooth circumferentially to make a crown preparation, there can be a difference in hardness between tooth and restorative material, which can lead to ditching of the preparation or inaccuracies. Because CompCore AF cuts like dentin, these challenges are avoided," added Dr. Goodchild.

"CompCore AF is easy to dispense, flows nicely but is still stackable, cures to a nice depth, and cuts like dentin."

-Jason Goodchild, DMD

Ideal Delivery & Handling

CompCore AF offers simple delivery through its dual-barrel automix Syringe- Mix. In addition to being easily expressed, it comes in 3 colors—A3, white, and blue—to meet the needs of the specific restorative material being used and the area of the mouth being restored.

"Being able to see where the restorative material ends and the tooth begins is vital, so the blue shade provides a great contrast between restorative material and tooth," said Dr. Goodchild.

The white shade is opaque, which provides some contrast and is ideal under zirconia crowns where there is limited translucency. A3 is a tooth-colored shade that blends seamlessly to dentin. It is especially suited for more translucent restorations that involve glass ceramic or lithium disilicate materials, as it will not have an impact on the final shade of the

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adaptation. Its ideal viscosity allows it to easily flow into all geometries of the preparation for predictable and long-lasting results.

Unique Dual-Cure

CompCore AF shade A3 can be light-cured up to an 8-mm depth in just 30 seconds (white and blue shades require 40 and 60 seconds, respectively), which means clinicians can quickly move forward to the next stages of treatment. In the absence of light, the material also self-cures in 4.5 minutes intraorally. This unique dual-cure is especially important when a post is placed far down in the tooth and there's little chance that light will reach it. For these types of cases, it's important to use a core material that will consistently polymerize down in the darkest parts of the preparation.

"What's unique about CompCore AF is that it's a dual-cure material with no maximum depth of cure. This means that you can place it in 10-millimeter increments if you really wanted to," said Dr. Goodchild. "If a clinician is light-curing the material, they can simply place it, zap it with 30 seconds of light, and get right to work on the crown prep stage. To me, this is a wonderful, wonderful thing."

Case In Point: Building a Better Core



Figure 1—CompCore AF is placed into tooth No. 4 and light-cured for 30 seconds.

Figure 2—Final core buildup of tooth No. 4

Figure 3—Final preparation; CompCore AF blends easily with dentin.

Figure 4—Buccal retracted view of final crown on tooth No. 4

CompCore by the Numbers...

- 250 MPa compressive strength
- 30 seconds to light-cure up to 8 mm
- 4.5 minutes to self-cure
- 33% less polymerization shrinkage
- 3 shades: blue, white, and A3

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