

Why waste time with incremental layering?

Instead, you can place 3M™ Filtek™ Bulk Fill Posterior Restorative in one layer up to 5 mm deep. You're about to learn why.



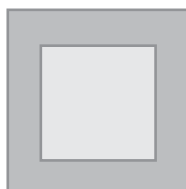
One 4 mm placement of Filtek™ Bulk Fill Posterior Restorative puts less stress on the tooth than two separate increments of many universal composites.



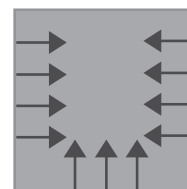
3M™ Filtek™ Bulk Fill Posterior Restorative

Shrinkage, stress ... and bulk fill restoratives

Shrinkage is easy to measure and easy to understand. Polymerization shrinkage is the change in volume of your composite that occurs as you cure it. The composite shrinks as all the freely moving resin molecules go through the free-radical methacrylate polymerization reaction.



Stress is a little harder to visualize, and a little harder to measure. Stress is the amount of force that is exerted on the tooth because of polymerization shrinkage. Stress is one factor that can lead to debonds, cracked enamel and marginal leakage.



The amount of stress is based on a number of factors

It's not just the amount of shrinkage. Both the shrinkage of the material and the stiffness of the material come into play.¹

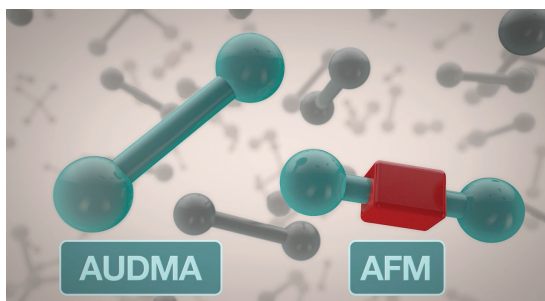
- A sealant, for example, can have very high shrinkage (over 5%!) and place very low stress on the tooth.²
- A universal restorative might have 2% shrinkage, but because it is much stiffer, it will place much higher stress on the tooth.²

1. Li, J., Li, H., & Fok, S. L. (2008). A mathematical analysis of shrinkage stress development in dental composite restorations during resin polymerization. *Dental Materials*, 24, 923-931.

2. Kleverlaan, C. J., & Feilzer, A. J. (2005). Polymerization shrinkage and contraction stress of dental resin composites. *Dental Materials*, 21, 1150-1157.

So what enables a dental composite to be placed in bulk?

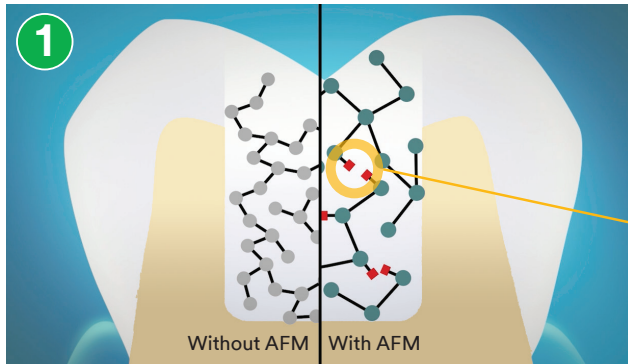
There are recent advances in chemistry that allow us to control polymerization stress.



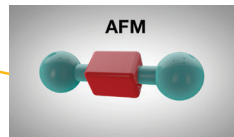
Filtek Bulk Fill Posterior Restorative uses 2 new resin components to reduce polymerization stress.

To learn how it works, read on ...

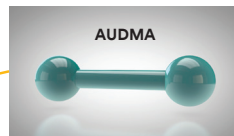
3M™ Filtek™ Bulk Fill Posterior Restorative



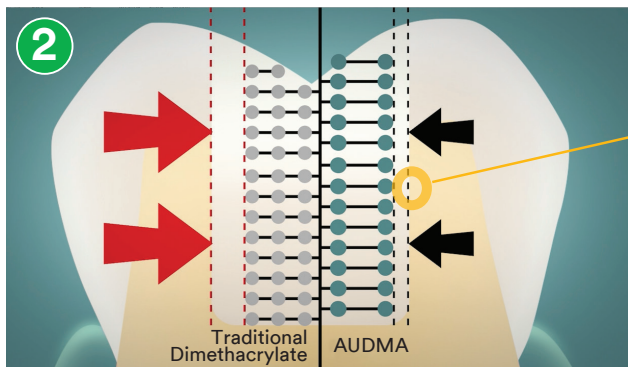
Here's how it works.



The unique component of the first resin is an addition-fragmentation monomer (AFM). The unique feature of this resin is that during polymerization, the central group **can fragment to relieve stress**. The fragments can then re-polymerize in a lower stress state.



The other new resin component is aromatic urethane dimethacrylate (AUDMA). Because it's a larger monomer than found in traditional dimethacrylates, it limits the number of shrinkage zones. This helps **reduce the amount of shrinkage and stress** that occurs during polymerization.



Ordering Information

Refill	Item #	Item #
SHADE	SYRINGE	CAPSULE
A1	4863A1	4864A1
A2	4863A2	4864A2
A3	4863A3	4864A3
B1	4863B1	4864B1
C2	4863C2	4864C2

SYRINGE SHADE REFILLS include 1 – 4g syringe; Technique Guide; Instructions for Use.

CAPSULE SHADE REFILLS include 20 – 0.2g capsules; Technique Guide; Instructions for Use.

Refer to Instructions for Use for a full list of indications.

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