

REALITY

The information source for esthetic dentistry

2019

The Ratings | COMPOSITES – UNIVERSAL

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(4.6)



Filtek One Bulk Fill

INTRODUCTION/MANUFACTURER'S CLAIMS

New flagship bulk fill composite from 3M. Filtek One Bulk Fill succeeds Filtek Bulk Fill Posterior, which we noted that despite its name, 3M was recommending its use throughout the mouth, but its 50% translucency made it not well suited for restoring most anterior preps due to the graying out effect. Even when it was used posteriorly, the esthetics left something to be desired. The new name better reflects the product's indications, but we were really interested to see if the slight change in composition would give it more universal appeal, since according to 3M, increased opacity will give you improved esthetics.

TYPE

Nano-hybrid.

AVERAGE PARTICLE SIZE (MICRONS)

4-20 nanometers.

FILLER CONTENT (%)

Weight	76.5
Volume	58.4

CONSISTENCY AND HANDLING

Smooth consistency with minimal stickiness and nice sculptability and virtually no slumping. Most (71%) evaluators really liked the handling, while the other 29% found its handling to be acceptable and similar to most other composites.

RAVES & RANTS

- + Excellent depth of cure
- + Increased opacity reduces graying out effect
- Hard to read printing on tips
- Not the product of choice for esthetic anterior restorations

MANUFACTURER

3M www.3m.com/3M/en_US/dental-us/?WT.mc_id=www.3m.com/dental

PRICES

Kit
None
Refills
Syringes
\$98.62/4g (\$24.66/g)
Capsules (20)
\$104.71/4g
(\$26.18/g or \$5.24/capsules)

SHELF LIFE

3 years

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Comments from the evaluators:

- I like it very much
- Not stiff enough for me. Too creamy. However, it is not sticky.
- I really like the handling of this composite resin.
- Great handling material. Not sticky at all.
- It is not sticky and can be handled well in Class I situations. However, in Class IIs that are wide, the composite is hard to manage to stick to the vertical walls and it does not stay in place easily. Nonetheless, in those situations where the composite has matrix placed, there is no problem. Free hand modelling is not easy.
- Was ok.
- The material felt slightly softer and more adaptable than other composites.
- Very good as I often use a brush.

As far as viscosity is concerned, all evaluators except one felt it is easy to bulk fill a proximal box, with the lone holdout finding it slumps excessively.

Comments from the evaluators:

- The small tip helps!
- Slumps more than it should.
- It flows nice, but not stiff enough for my ideal handling characteristics.
- I wouldn't mind a "slightly" more viscous version though.
- It handles well if the matrix is in place. If you try to build it up freehand, it is difficult.
- I would say it's okay. It does stick to my instrument more than most.
- The material flows better than other composites without much slumping.

VOLUMETRIC SHRINKAGE

1.8%

POROSITY

Most (76%) evaluators found virtually no surface voids after finishing, while the other 24% had only a few voids.

DEPTH OF CURE (mm)

5

CURING TIME FOR GINGIVAL WALL INCREMENT

Cure Time	Cure % (gingival compared to occlusal)
20s	77
40s	96

The instructions tell you to cure it 10 seconds from the occlusal, buccal, and lingual. While supplemental cures from the buccal and lingual make sense, we still believe an initial 40-second cure from the occlusal is prudent. Most (59%) evaluators cured it at least 20 seconds from all three positions, while the other 41% did not encounter any problems following the instructions. At least four evaluators were even hesitant about using 5mm increments. On the other hand, only one evaluator reported experiencing a few cases of post-op sensitivity that could have possibly be attributed to contraction stress from placing 5mm increments.

KNOOP HARDNESS

56.6

WORKING TIME UNDER DENTAL UNIT LIGHT

<30 seconds. You definitely need a light filter when manipulating this material.

SHADES

5 A1, A2, A3, B1, and C2. Most (88%) evaluators thought the shade selection was adequate for posterior use, while the other 12% needed more shades. On the other hand, slightly more than half (53%) of the evaluators needed more shades for anterior teeth, while the other 47% thought the current selection is enough. The prevailing opinion is that there are better composites to use anteriorly.

Shade	T/O rating (%)
A2	61

This means it is, indeed, more opaque than its predecessor, but still on the translucent end of body shades. It should blend into most occlusal surfaces without having the graying effect of more translucent shades. And, at the same time, it's not overly opaque, which typically looks too high in value on an occlusal surface.

Most (76%) evaluators thought it was fine, while the other 24% were evenly split between too translucent and too opaque. However, of the evaluators who used it anteriorly, half of them found it would block shine-through in through-and-through Class IIIs and IVs, while the other half stated they could not pull off that feat consistently. And for those who tried to simulate incisal translucency with Class IVs, most (67%) were successful, while the other 33% found it to be hit or miss.

Finally, concerning the feature of its becoming more opaque after curing and minimizing the graying out in Class I and II restorations, slightly more than half (53%) found it to be very esthetic, while the other 47% still experienced some graying out.

Comments from the evaluators:

- They finally got the grey out!
- Great improvement over the "posterior" version that was way too translucent for anterior restorations.
- Better than prior version.
- Translucency almost equal to Filtek Supreme Ultra Enamel but adequate for posterior restorations.
- It's okay since it HAS to be a little on the translucent side if it's supposed to allow the light to penetrate to depth.
- Just right for posterior restorations. Needs more translucent material (as well as opaque to accurately match dentin and enamel).
- Worked well for me.
- Did not show darkness.

SHADE GUIDE

None, but keyed to Vita. Most (67%) evaluators found the shades to be a close match to their Vita analogs, while the other 33% found them to be a mixed bag —

some matched and some didn't. However, virtually all the evaluators were not particularly fussy about shade matching for posterior teeth.

RADIOPACITY

All evaluators thought it was adequate, with one evaluator stating it was more radiopaque than enamel.

FLUORESCENCE

Not close to tooth structure — appears darker and purplish.

FINISHING AND POLISHING

Polisher	Matches Enamel Gloss
Sof-Lex Diamond Spirals	No, but close
PoGo	Yes

Most (59%) evaluators found it to come close to but not an exact match to an enamel-like gloss, while 35% thought it was easy polishing this material to an enamel-like gloss and 6% were not successful at all. One evaluator noted that it held its luster at 6-month recalls.

PACKAGING

No kits, only refills in plastic, non-resealable bags with the product name, shade, and expiration date. While bags don't take up much room, they are not very inventory-friendly.

Inside the bags, the capsules come in small, opaque white jars with a flip-up top for dispensing. Underneath the top is a foil seal that needs to be removed. The product name, shade, and expiration date are imprinted on each black capsule, but the color of the printing is medium gray, which makes it somewhat difficult to read. Thankfully, this information is also printed on the jar's label and is much easier to read in that location.

The nose of each capsule is quite long and the orifice is narrow for easier entry into the deep reaches of preps, but the material is still reasonably easy to dispense.

Virtually all evaluators thought the jar dispensing was adequate.

Most (59%) evaluators thought the narrower tip design was an improvement over previous ones and allowed better access to gingival walls in proximal boxes, while 35% did not find them to be much different than those used by the competition and 6% did not like the design.

The screw-type syringes that have bright green plungers and hubs have moisture-resistant white labels with the expiration date and a color-coded band that includes the shade. The caps are tight, but

can be removed easily using a rotational movement. Most (88%) evaluators found the syringes to be pretty much the same as others, while the other 12% really liked their design.

DIRECTIONS

Multi-language, plain paper sheet in the annoying foldout design. Information is fairly straightforward if you can even read the nano-font. There are also three, coated paper, color technique pamphlets/sheets that have very well-done illustrations demonstrating Class I and II restorations, anterior restorations, and core buildups. Virtually all evaluators found the directions to be adequate.

REALITY

STRENGTHS More opaque than previous version, which minimizes graying out. Excellent depth of cure and exceeds even 90% cure in proximal box, but only after 40 seconds of light curing. Low shrinkage, low porosity, exceptional handling, not sticky, adapts well to cavity walls, adequate polish and shades, blends well into tooth structure. Nice tip design. Tips have enough material for most preps. Good radiopacity.

WEAKNESSES Still too translucent to consistently block out shine-through in through-and-through anterior preparations. Needs more shades for anterior teeth. Fluorescence is poor – it appears purplish and darker than tooth structure. Not much working time under dental unit light. Hard to read shade on tips. Even though graying out is less than with previous version, it is not eliminated.

BOTTOM LINE

A definite improvement on its predecessor and an excellent choice as a posterior restorative, but it is still not the product of choice for anterior use.

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