Competitive Product Comparison

Filtek™ Supreme Ultra
Flowable Restorative
(by 3M™ ESPE™)

SureFil® SDR™ flow
Posterior Bulk Fill Flowable Base
(by Dentsply Caulk)

Results:
- 3M™ ESPE™ Filtek™ Supreme Ultra Flowable Restorative showed significantly less in-vitro wear than SureFil® SDR™ flow.
- The compressive strength of Filtek Supreme Ultra flowable was greater than SureFil SDR flow.
- Filtek Supreme Ultra flowable retained its polish longer and at a substantially higher gloss level than SureFil SDR flow.
- Filtek Supreme Ultra flowable has significantly higher diametral tensile strength than SureFil SDR flow.
- Filtek Supreme Ultra flowable is more versatile than SureFil SDR flow.

In-Vitro Wear: The in-vitro wear rate of Filtek Supreme Ultra flowable was compared to SureFil SDR flow after a total of 200,000 cycles of 3-body wear.

Proximal contacts: SureFil SDR flow instructions state that the flowable should be stopped at a minimum of 2 mm below the occlusal cavosurface. Users of SureFil SDR flow are cautioned to establish contacts with effective matrix techniques as this flowable will not help distend the band. Proper contacts may be more difficult to form with a flowable versus a universal restorative. Proximal surfaces are exposed to abrasive forces from contacts, food and toothbrush abrasion. Loss of restorative material on the proximal surface could result in loss of contacts.

Compressive Strength: Cylindrical rods made of the material and compressive forces are applied to the opposite ends of the sample length until fracture occurs.

Polish Retention: Polished samples of Filtek Supreme Ultra flowable and SureFil SDR flow were subjected to 6000 cycles of toothbrush abrasion. Gloss was measured initially, after 500 toothbrush cycles up to 2000 cycles and after every 1000 cycles to 6000 cycles.

Diametral Tensile Strength: Cylindrical rods made of the material and compressive force is applied across the diameter of the rods until fracture occurs.
| **Composition** | **Resin:** BisGMA, TEGDMA and Procrylate Filler System:  
- Non-agglomerated/non-aggregated 20 nm silica filler  
- Non-agglomerated/non-aggregated 75 nm silica filler  
- Aggregated zirconia/silica cluster filler (comprised of 20 nm silica and 4 to 11 nm zirconia particles).  
  - Cluster particles size range 0.6 to 10 microns  
  - Ytterbium trifluoride particle size range of 0.1 to 5 microns.  
  - Filler loading is 65% by weight (46% by volume) | **Resin:** Ethoxylated Bisphenol A dimethacrylate (EBPADMA);  
Triethylene glycol dimethacrylate (TEGDMA);  
Modified urethane dimethacrylate resin;  
Camphorquinone (CQ) Photoinitiator; Butylated hydroxytoluene (BHT); UV Stabilizer Filler:  
- Barium-alumino-fluoro-borosilicate glass;  
- Strontium alumino-fluoro-silicate glass;  
- 68% by weight, 44% by vol.  
- Titanium dioxide; Iron oxide pigments |
| **Indications** | Base/liner under direct restorations  
Undercut blockout  
Class III and V restorations  
Restoration of minimally invasive cavity preparations (including small, non stress-bearing occlusal restorations)  
Repair of small defects in esthetic indirect restorations  
Pin and fissure sealant  
Repair of resin and acrylic temporary materials | Base in cavity Class I & II direct restorations  
liner  
 Pin & Fissure sealant  
Conservative Class I restorations  
Core build-up |
| **Manufacturer’s Claims** | True nanotechnology  
"Flow on demand"  
Lower shrinkage  
Improved esthetics  
Improved polish retention  
Improved fluorescence  
Easy to read labels  
In-vitro wear resistance similar to Filtek™ Supreme Plus Flowable Restorative  
Shades match Filtek™ Supreme Universal Restorative | Chemically compatible with conventional methacrylate based adhesives and composites  
20-second cure time for 4mm increment  
Easy placement technique with self-leveling handling eliminates steps before curing and provides excellent cavity adaptation  
Radiopaque – easily distinguishable on an x-ray |
| **Shades** | A1, A2, A3, A3.5, A4, B1, B2, C2, D2  
W (White), XW (Extra White)  
Opaque A3 | U (Universal), A1, A2, A3 |
| **Depth of cure** | **Shades** | **Increment depth** | **Cure Time** | **Cure Time** |
| | | | All halogen lights LED lights with output 400–1000 mW/cm² | Elipar™ S10 (LED lights with output 1000–2000 mW/cm²) | **Shades** | **Light Output >550mW/cm²** |
| | Opaque shades | 1.5mm | 40 sec. | 20 sec. | **2 mm** | **4 mm** |
| | All other shades | 2.0mm | 20 sec. | 10 sec. | U | 20 sec. | 20 sec. |
| | | | | | A1, A2, A3 | 20 sec. | 40 sec. |

*Refer to curing light manufacturer’s recommendations for compatibility and curing recommendations (Shade offering may vary by region)

| **Delivery** | All shades available in 2 g Syringes or 0.2 g Capsules | 0.25 g Compula® Tips and 1 g syringes (Delivery options may vary by region) |

Information obtained from the Dentsply Caulk website (9-2012) and SureFil SDR Flow Instructions for Use (1-24-12)