

Competitive Product Comparison

Paradigm™ Nano Hybrid Universal Restorative

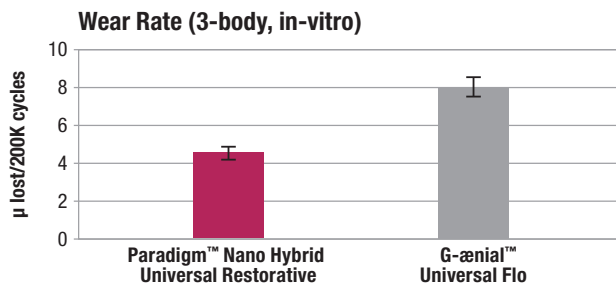
G-ænial™ Universal Flo Light-cured Radiopaque Flowable Composite

(Manufactured by GC America)

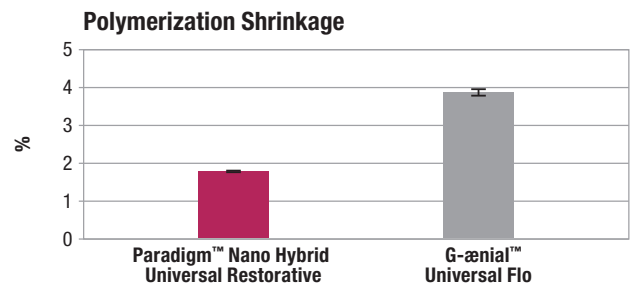
Summary—Paradigm™ Nano Hybrid Universal Restorative offers these advantages:

- The wear rate of Paradigm Nano Hybrid restorative was lower than G-ænial Universal Flo.
- Paradigm Nano Hybrid restorative exhibited less polymerization shrinkage than G-ænial Universal Flo.
- The radiopacity value of Paradigm Nano Hybrid was higher than G-ænial Universal Flo.
- The flexural strength of Paradigm Nano Hybrid restorative was statistically higher than G-ænial Universal Flo.
- Paradigm Nano Hybrid restorative provided a greater depth of cure than G-ænial Universal Flo.

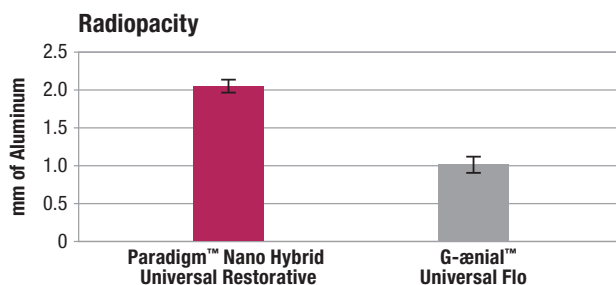
Test Results and Discussion:



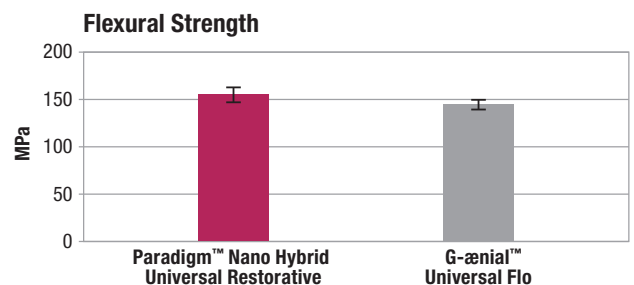
In-Vitro Wear: Wear rates were determined using a 3-body, in-vitro test. Dimensional loss during the 200,000 cycle test is measured every 40,000 cycles and wear rates were calculated using linear regression.



Polymerization Shrinkage: The volumetric shrinkage was determined using the test methodology described by Watts and Cash.



Radiopacity: An X-ray is taken of 1.0mm disk of cured composite and an aluminum step wedge. The reported radiopacity is determined by comparing the optical density of the composite image to the optical density graph of the aluminum steps. Radiopacity less than 1 is considered radiolucent. In this test, the radiopacity of dentin is equivalent to 1mm of Al and enamel is equivalent to 2mm of Al.



Flexural Strength: Determined using a 3-point bend method. A load is applied to a cured, test sample bar that is supported on both ends. The load increases until the sample breaks.

Competitive Product Comparison

	Paradigm™ Nano Hybrid Universal Restorative from 3M ESPE	G-ænial™ Universal Flo from GC America																		
Composition	Resin: BIS-GMA, UDMA, BIS-EMA, PEGDMA and TEGDMA Filler System: <ul style="list-style-type: none"> • Surface modified zirconia/silica with a median particle size of approximately 3 microns or less • Non-agglomerated/non-aggregated 20 nanometer surface modified silica particles • 82% by weight (68% by volume) 	Resin: Bis-MEPP, UDMA (Urethane dimethacrylate), TEGDMA Filler System: <ul style="list-style-type: none"> • Silane treated 0.2 microns Strontium glass • Silica 0.016 microns • 69% filler loading by weight (50% by volume) 																		
Indications	<ul style="list-style-type: none"> • Direct anterior and posterior restorations including occlusal surfaces • Core build-ups • Splinting • Indirect restorations including inlays, onlays and veneers 	<ul style="list-style-type: none"> • Direct restorative for Class I, IV, III, II and V cavities • Fissure sealant • Sealing hypersensitive areas • Repair of (in)direct aesthetic restorations, temporary crown and bridge, defect margins when margins are in enamel • Blocking out undercuts • Liner or base 																		
Manufacturer's Claims	<ul style="list-style-type: none"> • Easy to polish • Excellent strength and wear resistance • Does not stick to instruments when adapting • Easy to shape • Does not slump — holds shape prior to cure • Radiopaque • 12 shades that cover most dentists' daily needs 	<ul style="list-style-type: none"> • Demonstrates the physical performance of a regular composite material but in a flowable consistency • Benefits from a very high gloss rate and gloss retention rate • Thixotropic attributes that allow the material to have easy handling and placement • Offers superb invisible aesthetics without any compromises • 15 shades and three different levels of translucencies • Economical and ergonomical dispensing 																		
Shades	A1, A2, A3, A3.5, A4, OA2, OA3, B1, B2, B3, C2, D3	A1, A2, A3, A3.5, A4, B1, B2, B3, C3, A02, A03, CV, BW, JE, AE																		
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Delivery Options	3g syringes or 0.20g capsules	3.4g (2.0ml) syringes																		

Information obtained from the GC website (6/2012) and G-ænial Universal Flo Instructions for Use (06/11)



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PB6118/0313