

## G-ænial™ Universal Flo (GC America)

(Project # 13-008)

G-ænial Universal Flo is a radiopaque nanohybrid flowable composite with Strontium Oxide filler particles which have been milled to a mean size of 200 microns and are silanated and bonded to a non-bisGMA resin matrix. The manufacturer, GC, contends that their product is actually an injectable composite. A new formulation of radiopaque strontium glass is the main filler component. It has been milled down to a 200 nanometer particle size, which is half the size of most filler particles in the microhybrid category. The resin does not

contain bisGMA, rather, UDMA and bisEMA have been utilized. The manufacturer states that G-ænial Universal Flo can be used for all treatment classes of direct composite restorations. Information from the manufacturer states that G-ænial Universal Flo has physical properties that are superior to most flowable composites, and in some instances rival that of conventional nanohybrid composite materials. DECS laboratory tests revealed a fracture toughness value similar to most hybrid composite resin formulations and a viscosity much higher than most flowable composites. There are no clinical trials available to evaluate the long term performance of G-ænial Universal Flo. Laboratory research on this newer product is also scarce, but one study revealed that G-ænial Universal Flo performed better in three-body wear than all other conventional and flowable composites used in the study, and a greater flexural strength (Sumino et al, *Acta Odontol Scand* 2013,71:820-7).



### Manufacturer:

GC America  
3737 W. 127<sup>th</sup> Street  
Alsip, IL 60803  
800-323-7063  
800-423-2963 (FAX)  
Gca\_sales@gcamerica.com

### Suggested Retail Price:

\$88.50 individual syringe (3.4 g)  
\$85.99 when purchasing 6 or more (3.4 g) syringes

### Government Price (through Henry Schein):

\$62.24 individual syringe (3.4g)

### ADVANTAGES:

- + Easy to place
- + Good polishability
- + Good esthetics

- + Easier to place than a traditional composite, I was confident that there were no voids
- + Good radiopacity
- + Good viscosity, not runny at all

**DISADVANTAGES:**

- Too translucent for Class IV's
- Difficult to get a good proximal contact
- Material is too sticky
- Shade turned darker after curing
- Can't sculpt the material

**SUMMARY AND CONCLUSIONS:**

G-ænial Universal Flo is a radiopaque nanohybrid flowable composite with a 200 micron mean particle size and utilizes a resin matrix free of bisGMA. It is 50% filled by volume and exhibits a 3.4% volumetric shrinkage. The Strontium Oxide glass filler particles are silanated to chemically bond to the resin matrix. The physical properties of G-Aenial Universal Flo compare well to other flowables. The manufacturer states that this product can be used in all configurations of cavity preparations, but DECS evaluators prefer to use conventional resin-based composite filling materials in areas of occlusal wear and proximal contacts. G-ænial Universal Flo is rated **ACCEPTABLE** as a flowable composite for use in Air Force clinics.

