TECHNICAL DATA SHEET

Product: Alpha-Flow® Light Cure Flowable Composite

Product Description: Alpha-Flow is a radiopaque fluoride containing light cure resin-based micro-hybrid flowable composite. The organic matrix is based on Bis-GMA resin and contains a 38% by volume blend of inorganic fillers with particle sizes ranging from 0.02 – 0.70 microns. This special combination provides a material with extreme versatility for use in a wide range of procedures, including Class III and V cavity figurations and small Class I and II restorations.

Indications for Use: For blocking out small undercuts, fill tunnel preps, marginal defect repairs, repair composite and ceramic veneers and re-conform temporary restorations.

Appearance: Opaque, flowing paste.
Shades: A1, A2, A3, A3.5, B1, B2, B3, B4, C1, C3 and Universal Opaquer

Curing Mechanism: Light cured by applying an external energy activated Dental Blue Light with minimum output of 600 mW/cm^2 and wavelength 400 to 500 nanometers.

Shelf-Life: 30 months

Filler Type: Radio-opaque and fluoride releasing barium-alumino-boro-silicate glass

Filler % by Volume:	38
Filler Particle Range (µm):	0.02 – 0.70
Average Filler Particle Size (µm):	0.65

Main Composition (%w/w):

Component:	%w/w
Inorganic filler	55 – 65
Blend of methacrylate and dimethacrylate monomers	35 – 45
Initiators	<1
Inhibitor	<1
UV stabilizers	<1
Colorants	<1

Physical /Mechanical Properties:

Sensitivity to ambient light:	No change in consistency after 60 sec. exposure to test light.
Flexural strength, MPa:	110 (typical value)
Water absorption, µg/mm^3:	17 (typical value)
Water solubility, µg/mm^3:	1.3 (typical value)
Shade:	Matches Vita Shade Guide
Color stability:	Stable
Radio-opacity, 1 mm disk:	≥1 mm thickness of Aluminum
Depth of Cure, mm/2:	
Light Shades (A1, A2, A3, B1, B2, C1)	2.3 (typical value)
Dark Shades (A3.5, B3, B4, C2, C3, Opaquer)	2.0 (typical value)

Regulatory Classification:
This product is in conformity with the following standard(s) or other normative documents:

Code of Federal Regulations CFR 21 Part 820 – Medical Device Quality System Regulation;
Code of Federal Regulations CFR 21 Part 872, §872.3690 Tooth shade resin material;
International Standard ISO 4049:2009/ Polymer-based restorative materials;
ADA Specification No. 27/ Direct Filling Resins:1993