



TECHNICAL DATA SHEET

Product:	Alpha II [®] AP Light Cure Micro-Hybrid Composite	
Product Description:	Alpha II [®] AP is a light cure resin-based micro-hybrid composite with Fluoride. Alpha II [®] AP is available in 7 Vita ^{®*} shades plus four opaquers and an incisal shade. The organic matrix oligomer is based on Bis-GMA resin. Alpha II [®] AP is a radio-opaque restorative material that allows for easy identification in radiographs.	
Indications for Use:	Alpha II [®] AP is recommended for use in Class I and Class II restorations and is aesthetically accurate for use in Class III, VI, and V restorations.	
Appearance:	A homogeneous paste available in seven Vita [®] shades plus four opaquers and an incisal shade.	
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:	Barium-alumino-boro-fluorosilicate glass and amorphous silica.	
	Filler % by Volume	53
	Filler Particle Range (μ)	0.02 - 2
	Average Filler Particle Size (μ)	1
Main Composition (%w/w):		
	Filler	64 – 84
	Bis-GMA	6 – 18
	Comonomers	8 – 21
	Preservative	< 1
	Colorant	< 1
	UV light absorber	< 1
	Photoinitiator	< 1
Physical /Mechanical Properties:		
	Water Sorption, μg/mm ³	20
	Water Solubility, μg/mm ³	0.60
	Diametral Tensile Strength, MPa	45
	Compressive Strength, MPa	230
	Flexural Strength, MPa	110
	Radiopacity, 1 mm disk	equivalent to 1 mm aluminum
	Depth of cure, mm/2:	
	Light shades (A1, A2, A3, B1, B2)	2.5
	Dark shades (A3.5, Opaquer)	2.3

Regulatory Classification:

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

- International Standard ISO 4049: 2019 Dentistry – Polymer-Based Restorative Materials
- ANSI/ADA Specification No. 27: 2016 Dentistry – Resin-Based Filling Materials



European Standard EN 1641: 2009 Medical Devices for Dentistry – Materials
Code of Federal Regulations CFR 21 Part 820 Medical Device Quality System Regulation
Code of Federal Regulations CFR 21 Part 872 Dental Devices, Section 3690 Tooth Shade Resin Material

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Associated Documents: DCN 1250,1625,3684,5121, 6333, 6384, 6734