

# TECHNICAL DATA SHEET

<b>Product:</b>	Alpha-Dent® Light Cure Hybrid Composite
<b>Product Description:</b>	Alpha-dent® Light Cure Composite Restorative Material with a Bis-GMA polymeric matrix and a 56% by volume blend of inorganic radiopaque fillers with particle range from 0.02 to 4 microns.
<b>Indications for Use:</b>	Alpha-dent® Light Cure Composite Restorative Material is contraindicated on patients with a history of severe allergic reaction to methacrylate resins.
<b>Appearance:</b>	A thick homogeneous paste available in all Vita® Shades.
<b>Curing Mechanism:</b>	Light cured by applying an external energy activated Dental Blue Light with minimum output 600 mW /cm <sup>2</sup> and wavelength 400 – 500 nanometers.
<b>Shelf-Life:</b>	30 months
<b>Filler Type:</b>	Barium glass and Silica
	Filler % by Volume: 56
	Filler Particle Range, μ: 0.02 - 4
	Average Filler Particle Size, μ: 2
<b>Main Composition (%w/w):</b>	
	Blend of radiopaque fillers 60 – 80
	Bis-GMA 10 – 20
	Comonomer diluents 5 - 15
	Photoinitiator < 1
	Stabilizer < 1
	Colorant < 1
<b>Physical /Mechanical Properties: (Typical Values)</b>	
	Compressive Strength, MPa 225
	Diametral Strength, MPa 47
	Flexural Strength, MPa 95
	Water Absorption, μg / mm <sup>3</sup> 20
	Water Solubility, μg / mm <sup>3</sup> 1
	Depth of cure, mm/2 2.5
	Radiopacity, 1 mm disk equivalent to 1 mm aluminum