

Master Bond LED401 White One Part, LED Curable Compound

Category : Polymer , Thermoplastic , Adhesives, Sealants, and Coatings

Material Notes:

Description: Master Bond LED401 White is a one part LED type system that cures fully upon exposure to a 405 nm wavelength light source where the presence of any UV light is minimal or incidental. In fact, this unique system will fully cure tack-free without any oxygen inhibition. This technology allows LED401 White to be utilized not only as an adhesive, but as a sealant, coating and encapsulation system. This system can cure in sections up to and beyond 1/8 inch thick upon exposure to the LED light. Since it is a LED curable system, it is intrinsically safer than one requiring UV light for polymerization, as LED light emitting sources are generally considered to be safer and more user friendly than their comparable UV counterparts. Master Bond LED401 White requires no mixing and will cure rapidly, with the speed of cure dependent upon the intensity of the light source, the thickness of the layer and the distance of the light source from the material being cured. Realistically, the light intensity should be 1-4 watts/cm². Master Bond strongly advises end users to consult with their light source provider to ascertain the best LED for their particular application, along with details on the wavelength being emitted by the light source. In thinner sections, full cures can be achieved in 15-30 seconds (sometimes less than that), while thicker sections require longer cure times. Once cured, LED401 White has excellent dimensional stability, good electrical insulation properties and very good chemical resistance to water, many acids, bases and oils. It also bonds well to glass, polycarbonates and acrylics, along with other plastics and metals. Prior to cure, it has a high viscosity consistency, but it remains flowable. Additionally, the formulation is solvent-free. This product is opaque white color which adds a special dimension to light initiated curing systems, since nearly all are either transparent or tinted with dyes. Product Advantages: Requires LED light source emitting light at 405 nm wavelength; no UV light required. One component system; no mixing needed; ready to use as supplied. Fast curing upon exposure to appropriate light source. No oxygen inhibition while curing; will fully cure beyond 1/8 inch. White color, totally opaque. Very good dimensional stability. Exceptional physical properties. High bond strength with superior adhesion to surface treated metals, glass and many plastics. Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-LED401-White-One-Part-LED-Curable-Compound.php

Physical Properties	Metric	English	Comments
Viscosity	>= 350000 cP	>= 350000 cP	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	65 - 70	65 - 70	
Tensile Strength at Break	>= 24.1 MPa	>= 3500 psi	
Tensile Modulus	>= 1.38 GPa	>= 200 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 - 65.0 µm/m-°C	33.3 - 36.1 µin/in-°F	
Maximum Service Temperature, Air	121 °C	250 °F	
Minimum Service Temperature, Air	-51.1 °C	-60.0 °F	

Thermal Properties	Metric	English	Comments
	70.0-75.0 °C	158-167 °F	
Electrical Properties	Metric	English	Comments
Dielectric Constant	3.9	3.9	
	@Frequency 60.0 Hz, Temperature 25.0 °C	@Frequency 60.0 Hz, Temperature 77.0 °F	
Processing Properties	Metric	English	Comments
Shelf Life	6.00 Month	6.00 Month	in original unopened container s, with no exposure to light

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