

Atom Adhesives AA-BOND F123 Epoxy Adhesive

Category : Polymer , Thermoset , Epoxy , Epoxy Adhesive

Material Notes:

AA-BOND F123 is a low viscosity, two-component epoxy formulation that signals both proper mixing and curing when bonding fiber optic bundles, potting glass fibers, and/or terminating single or multi-channel fiber optic connectors. Although this unique three-step color-change formulation unmixed components are light yellow, it turns light green on mixing, and changes again to a deep reddish-amber after the REQUIRED 100°C HIGH TEMPERATURE CURE. It exhibits good wicking, and develops strong, tough, mechanically stable bonds to a wide variety of fiber optic and optical materials that includes most metals, ceramics, glass and many plastics. AA-BOND F123 has good impact and thermal shock resistance, and yields excellent low stress, pot-and-polish connections which do not piston during cycle tests. It is also resistant to water and weathering, vapors and gases, most petroleum products, and an extended range of organic and inorganic environments. Shorter cures at higher temperatures (e.g. 2 minutes at 120°C or 1 minute at 150°C) are also possible. An additional post-cure of 30 minutes at 150°C is recommended when application temperatures higher than 150°C are anticipated. Appearance: Clear, Green Blue: Mixed; Clear, Light Yellow: Unmixed; Clear, Reddish-Brown: Cured Cure Type: Heat cure or Room Temperature Benefits: Low viscosity Fast cure Good impact and thermal shock resistant Color coded Mix Ratio by weight: 100:10/Resin:Hardener Typical Application: Fiber optic assembly, multimode and single mode connectors, small potting and sealing applications. Information provided by Atom Adhesives

Order this product through the following link:

http://www.lookpolymers.com/polymer_Atom-Adhesives-AA-BOND-F123-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	uncured
Viscosity	4000 cP	4000 cP	uncured

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	86	86	
Adhesive Bond Strength	20.0 MPa	2900 psi	alum to alum

Thermal Properties	Metric	English	Comments
CTE, linear	63.2 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	35.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	203 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	113 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
Glass Transition Temp, Tg	120 °C	248 °F	

Optical Properties	Metric	English	Comments
Refractive Index	1.55	1.55	
Transmission, Visible	93 %	93 %	

Electrical Properties	Metric	English	Comments
Dielectric Strength	15.7 kV/mm	400 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	5.00 min	0.0833 hour	
	@Temperature 100 °C	@Temperature 212 °F	
Pot Life	1440 min	24.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	240 min	240 min	uncured

Descriptive Properties	Value	Comments
Thixotropic Index	1	

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