

Tra-Con Tra-Bond F123HV Color Keyed Thixotropic Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-BOND F123 HV is a fast cure, high 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 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. TRA-BOND F123 HV 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 @ 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. For masses over 1/4 gram, allow material to gel for 4 hours at 25°C followed by 100°C for 5 minutes. Information provided by Tra-Con Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Tra-Con-Tra-Bond-F123HV-Color-Keyed-Thixotropic-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	Mixed
Solids Content	100 %	100 %	Reactive Solids Content
Viscosity	60000 cP	60000 cP	Mixed (rv #7, 10 rpm)

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	87	87	
Adhesive Bond Strength	17.2 MPa	2500 psi	Lap shear, alum to alum

Thermal Properties	Metric	English	Comments
CTE, linear	63.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	35.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
Maximum Service Temperature, Air	175 $^\circ\text{C}$	347 $^\circ\text{F}$	
Minimum Service Temperature, Air	-60.0 $^\circ\text{C}$	-76.0 $^\circ\text{F}$	
Glass Transition Temp, Tg	120 $^\circ\text{C}$	248 $^\circ\text{F}$	Ultimate Tg

Optical Properties	Metric	English	Comments
Refractive Index	1.56	1.56	

Transmission Visible Optical Properties	93 % Metric	93 % English	6000-9000 Å Comments
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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	240 min	240 min	

Descriptive Properties	Value	Comments
Color	Green Blue	Mixed
	Light Yellow	Unmixed
	Reddish-Amber	Cured
Mix Ratio, parts by weight	100/10	Resin/Hardener
Thixotropic Index	5.9	1 rpm/10 rpm

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