

Tra-Con Tra-Bond F123MV Color Keyed High Temperature Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-BOND F123 MV is a fast cure, medium 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 MV 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. 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-F123MV-Color-Keyed-High-Temperature-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
Volatile Organic Compounds (VOC) Content	16.33 g/l	16.33 g/l	
Water Absorption	0.010 %	0.010 %	After 24 hours
Viscosity	8000 cP @Temperature 25.0 °C	8000 cP @Temperature 77.0 °F	After mixing

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	85.4 µm/m-°C	47.4 µin/in-°F	Below Tg
	216 µm/m-°C	120 µin/in-°F	Above Tg
Maximum Service Temperature, Air	175 °C	347 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	
Glass Transition Temp, Tg			Ultimate Tg

Thermal Properties	114 °C Metric	237 °F English	Comments
Optical Properties	Metric	English	Comments
Refractive Index	1.56	1.56	

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

Processing Properties	Metric	English	Comments
Cure Time	1.00 min	0.0167 hour	
	@Temperature 150 °C	@Temperature 302 °F	
	2.00 min	0.0333 hour	
	@Temperature 120 °C	@Temperature 248 °F	
	5.00 min	0.0833 hour	
	@Temperature 100 °C	@Temperature 212 °F	
Pot Life	120 min	120 min	25 grams
	120 min	120 min	100 grams

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	1	
Working Life hours	4	100 grams

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