

Tra-Con Tra-Bond F109 Fiber Optic Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-BOND F109 is specially designed to be used in fiber optic connectors where connections must be made in high humidity environments. This two part, low viscosity epoxy remains at a constant viscosity for a minimum of 20 minutes after mixing, allowing more connectors to be produced from a single package. It is an excellent choice for multi and single mode connectors as its superior wicking properties and high strength prevent pistoning. TRA-BOND F109 can be cured at room temperature overnight or as fast as 15 minutes at 90°C. The blue color facilitates easy polishing. This 100% solid system can be used for small potting and sealing applications where thermal shock and impact resistance are required. Fully cured TRA-BOND F109 provides excellent resistance to salt solutions, mild acids and alkalis and many other chemicals including petroleum solvents and alcohol. TRA-BOND F109 can be supplied in a wide variety of packages including 2 gram (or larger) BIPAX Kits, premixed and frozen syringes and 1 gram MINIPAX. Sufficient cure is developed for polishing connectors in 20 minutes at 65°C. TRA-BOND F109 will complete its cure at room temperature with no pistoning. Information provided by Tra-Con Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Tra-Con-Tra-Bond-F109-Fiber-Optic-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.03 g/cc	1.03 g/cc	Mixed
Volatile Organic Compounds (VOC) Content	25.54 g/l	25.54 g/l	
Water Absorption	0.38 %	0.38 %	After 24 hours
Viscosity	650 cP @Temperature 25.0 °C	650 cP @Temperature 77.0 °F	After mixing

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	82	82	
Adhesive Bond Strength	27.6 MPa	4000 psi	Lap shear, alum to alum

Thermal Properties	Metric	English	Comments
CTE, linear	73.0 $\mu\text{m/m-}^{\circ}\text{C}$	40.6 $\mu\text{in/in-}^{\circ}\text{F}$	Below Tg
	222 $\mu\text{m/m-}^{\circ}\text{C}$	123 $\mu\text{in/in-}^{\circ}\text{F}$	Above Tg
Maximum Service Temperature, Air	110 °C	230 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	
Glass Transition Temp, Tg	70.0 °C	158 °F	Ultimate Tg

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	

Processing Properties	Metric	English	Comments
Cure Time	15.0 min	0.250 hour	1 drop applications
	@Temperature 90.0 °C	@Temperature 194 °F	
	60.0 min	1.00 hour	
	@Temperature 65.0 °C	@Temperature 149 °F	
	1440 min	24.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	25 min	25 min	

Descriptive Properties	Value	Comments
Color	Clear	Resin
	Dark Blue	Hardener/Mixed
Mix Ratio, parts by weight	100/50	Resin/Hardener
Thixotropic Index	1	
Working Life minutes	30	

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