

## **Tra-Con Tra-Bond F112 Fiber Optic Epoxy Adhesive**

Category: Polymer, Adhesive, Thermoset, Epoxy

## **Material Notes:**

TRA-BOND F112 is a long pot life, impact resistant, fiber-optic adhesive. This two-part, low viscosity epoxy has the distinct advantage of remaining below 3000 cps for a minimum of 40 minutes. This allows more connectors to be produced from one mix. Low stress, TRA-BOND F112 is an excellent choice for multimode connectors and single mode connectors where excessive curing temperatures may cause cracking. It can be cured at room temperature overnight or as fast as 15 minutes at 90°C. The blue color facilitates easy polishing and its cured properties prevent pistoning. This products is a 100% solid system that can be used for small potting and sealing applications where resistance to thermal shock and impact are required. This epoxy can be supplied in many different packages including 2 gram (or larger) BIPAX kits, pre-mixed and frozen syringes or 1 gram MINIPAX. Variations on viscosity (or other properties) are available upon request. Sufficient cure is developed for polishing connectors in 15 minutes at 65°C. TRA-BOND F112 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-F112-Fiber-Optic-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments	
Specific Gravity	1.20 g/cc	1.20 g/cc	Cured	
Water Absorption	0.070 %	0.070 %	After 24 hours	
Viscosity	1800 cP	1800 cP	After mixing	
	@Temperature 25.0 °C	@Temperature 77.0 °F	Arter mixing	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	86	86	
Adhesive Bond Strength	17.2 MPa	2500 psi	Lap shear, alum to alum, 24 hrs @ 25°C
	20.7 MPa	3000 psi	Lap shear, alum to alum, 1 hr @ 65°C
	29.6 MPa	4300 psi	Lap shear, alum to alum, 15 min @ 90°C

Thermal Properties	Metric	English	Comments
CTE, linear	62.0 μm/m-°C	34.4 μin/in-°F	Below Tg
Maximum Service Temperature, Air	120 °C	248 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	
Glass Transition Temp, Tg	102 °C	216 °F	Ultimate Tg



Optical Properties	Metric	English	Comments	
Refractive Index	1.51	1.51		

Processing Properties	Metric	English	Comments
Cure Time	15.0 min	0.250 hour	
Cure rille	@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	30 min	30 min	2 grams

Descriptive Properties	Value	Comments
Color	Dark Blue	Cured
Mix Ratio, parts by weight	100/30	Resin/Hardener
Thixotropic Index	1	
Working Life hours	1	2 grams

## **Contact Songhan Plastic Technology Co.,Ltd.**

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