

## Tra-Con Tra-Bond F114 Optically Clear, Low Viscosity Blush-Free Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy

### Material Notes:

TRA-BOND F114 is a clear, low viscosity, room temperature cure, epoxy system with good optical properties that contains no solvents, has excellent wicking and wetting characteristics, and adheres strongly to glass, ceramics, most metals and plastics. The combination of low viscosity, blush-free cure under high humidity conditions, plus clarity and high spectral transmittance, recommends it for fiber optic (glass and plastic) assembly and repair applications and other high performance electronic and aerospace applications that include structural laminating, lens and prism assembly, and small volume optical potting. Fully cured TRA-BOND F114 provides excellent resistance to salt solutions, mild acids and alkalis and many other chemicals including petroleum solvents, lubricating oils and alcohol. Please Note: This material may have a blue tint in large masses, or thick films. Information provided by Tra-Con Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Tra-Con-Tra-Bond-F114-Optically-Clear-Low-Viscosity-Blush-Free-Epoxy-Adhesive.php](http://www.lookpolymers.com/polymer_Tra-Con-Tra-Bond-F114-Optically-Clear-Low-Viscosity-Blush-Free-Epoxy-Adhesive.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.00 g/cc	1.00 g/cc	Mixed
Solids Content	100 %	100 %	Reactive Solids Content
Volatile Organic Compounds (VOC) Content	9.03 g/l	9.03 g/l	
Water Absorption	0.010 %	0.010 %	After 24 hours
Viscosity	625 cP @Temperature 25.0 °C	625 cP @Temperature 77.0 °F	After mixing

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	83	83	
Adhesive Bond Strength	17.9 MPa	2600 psi	Lap shear, alum to alum, 4 hrs @ 65°C
	20.7 MPa	3000 psi	Lap shear, alum to alum, 24 hrs @ 25°C

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ @Temperature 20.0 °C	44.4 $\mu\text{in}/\text{in}\cdot\text{°F}$ @Temperature 68.0 °F	
Maximum Service Temperature, Air	130 °C	266 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	
Glass Transition Temp, Tg	53.0 °C	127 °F	Ultimate Tg

Thermal Properties	Metric	English	Comments
Optical Properties	Metric	English	Comments
Refractive Index	1.53	1.53	
Transmission, Visible	90 %	90 %	clear; thickness not quantified

Electrical Properties	Metric	English	Comments
Volume Resistivity	6.00e+13 ohm-cm	6.00e+13 ohm-cm	

Processing Properties	Metric	English	Comments
Cure Time	240 min	4.00 hour	
	@Temperature 65.0 °C	@Temperature 149 °F	
Pot Life	1440 min	24.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	35 min	35 min	100 grams
	40 min	40 min	25 grams

Descriptive Properties	Value	Comments
Color	Transparent, Clear	
Cytotoxicity Study	Passes	ISO 10933-5, elution method
Mix Ratio, parts by weight	100/50	Resin/Hardener
Thixotropic Index	1	
Working Life hours	1	25 grams
Working Life minutes	35	100 grams

## Contact Songhan Plastic Technology Co.,Ltd.

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