

Tra-Con Tra-Bond F113 High Impact Optically Clear Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-BOND F113 is an optically clear, low viscosity, high impact epoxy adhesive developed for bonding and small volume potting of plastic or glass optical fibers, lenses, and prisms, LED displays, and other optical components. It is recommended for laminating, bonding, and sealing applications where excellent wetting, good pot life and improved impact strength properties are required. This two part adhesive is easily mixed and cured at room temperature, and develops strong, tough bonds to glass and glass fibers, ceramics, many metals, and most rigid plastics. TRA-BOND F113 bonds offer resistance to mechanical impact and thermal shock, and are also resistant to weather, water, gases and vapors, petroleum products, salts, and mild acids and alkalis. Information provided by Tra-Con Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Tra-Con-Tra-Bond-F113-High-Impact-Optically-Clear-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.22 g/cc	1.22 g/cc	Mixed
Viscosity	180 cP @Temperature 25.0 °C	180 cP @Temperature 77.0 °F	After mixing

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	78	78	
Adhesive Bond Strength	27.6 MPa	4000 psi	Lap shear, alum to alum, 2 hrs @ 65°C

Thermal Properties	Metric	English	Comments
CTE, linear	55.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ @Temperature 20.0 °C	30.6 $\mu\text{in}/\text{in}\cdot\text{°F}$ @Temperature 68.0 °F	
Maximum Service Temperature, Air	100 °C	212 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	
Glass Transition Temp, Tg	45.0 °C	113 °F	Ultimate Tg

Optical Properties	Metric	English	Comments
Refractive Index	1.55	1.55	
Transmission, Visible	97 %	97 %	3200-9000 Å

Electrical Properties	Metric	English	Comments
Volume Resistivity	9.00e+8 ohm-cm	9.00e+8 ohm-cm	

Electrical Properties	Metric	English	Comments
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	16.9 kV/mm	430 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	60.0 - 120 min	1.00 - 2.00 hour	
	@Temperature 65.0 °C	@Temperature 149 °F	
	1440 min	24.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	120 min	120 min	

Descriptive Properties	Value	Comments
Color	Transparent, Clear	
Mix Ratio, parts by weight	100/30	Resin/Hardener
Thixotropic Index	1	
Working Life hours	3	

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