

Tra-Con Tra-Bond 2212 High Temperature Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy , High Temperature

Material Notes:

TRA-BOND 2212 was developed for high temperature bonding, laminating, filament winding and potting applications where the combination of good physical and mechanical properties plus superior wetting and handling characteristics is required. This dark amber, all liquid formulation contains no solvents, and is easily mixed, handled and applied at room temperature, however a final elevated-temperature cure step is required for complete cure. TRA-BOND 2212 develops strong, tough bonds to metals, glass and glass fabrics, ceramics and many other electronic and aerospace materials. The fully cured adhesive exhibits low weight loss and an improved retention of mechanical properties at elevated service temperatures. It also displays excellent chemical resistance and low permeability to gases and vapors coupled with superior electrical insulation properties. In addition, TRA-BOND 2212 provides very good resistance to water, weather, jet fuels, most petroleum products, salt solutions, mild acids and alkalis, and many other organic and inorganic compounds. For masses over 1/4 gram, step cure the material for 2 hours @ 75°C, followed by 1 hour @ 150°C. This step cure schedule can also be used for low stress applications. Information provided by Tra-Con Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Tra-Con-Tra-Bond-2212-High-Temperature-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.21 g/cc	1.21 g/cc	Mixed
Viscosity	21500 cP @Temperature 25.0 °C	21500 cP @Temperature 77.0 °F	After mixing

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	89	89	
Tensile Strength, Yield	47.6 MPa	6900 psi	
Elongation at Yield	2.0 %	2.0 %	
Adhesive Bond Strength	16.5 MPa	2400 psi	Lap shear, adhesion to glass

Thermal Properties	Metric	English	Comments
CTE, linear	71.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 °C	39.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 °F	Alpha 1
	171 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 °C	95.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 °F	Alpha 2
Maximum Service Temperature, Air	200 °C	392 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	

Glass Transition Temp, Tg Thermal Properties	155 °C Metric	311 °F English	Ultimate Tg Comments
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Electrical Properties	Metric	English	Comments
Volume Resistivity	7.70e+14 ohm-cm	7.70e+14 ohm-cm	
Dielectric Constant	3.9	3.9	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	15.6 kV/mm	395 kV/in	
Dissipation Factor	0.010	0.010	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min	1.00 hour	
	@Temperature 150 °C	@Temperature 302 °F	
Pot Life	1440 min	1440 min	(1 day)

Descriptive Properties	Value	Comments
Color	Dark Amber	
Heat Distortion Temperature °C	158	
Mix Ratio, parts by weight	100/3	Resin/Hardener
Thixotropic Index	1	

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