

Tra-Con Tra-Bond 2105 Clear Rigid, Medium Viscosity Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-BOND 2105 is a clear, medium viscosity epoxy adhesive which contains no solvents or other additives which can be harmful to the environment or to its users. It has excellent adhesion to glass, ceramics, most plastics and metals, and is particularly recommended for applications where dependable, reputable performance is required, including assembly and repair of fiber optic connectors, high performance electronic and aerospace systems, medical device assembly, and for structural laminating applications. The fully cured TRA-BOND 2105 is a good electrical insulator, has a high glass transition temperature for good rigidity and provides excellent resistance to weather, galvanic action, salt solutions and many chemicals including mild acids and alkalis, petroleum solvents, lubricating oils, jet fuels, gasoline and alcohol. Information provided by Tra-Con Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Tra-Con-Tra-Bond-2105-Clear-Rigid-Medium-Viscosity-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.12 g/cc	1.12 g/cc	Mixed
Solids Content	100 %	100 %	Reactive Solids Content
Volatile Organic Compounds (VOC) Content	3.52 g/l	3.52 g/l	
Water Absorption	0.24 %	0.24 %	After 24 hours
Viscosity	6000 cP @Temperature 25.0 °C	6000 cP @Temperature 77.0 °F	After mixing

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	84	84	1 hr @ 65°C
Elongation at Yield	4.0 %	4.0 %	
Adhesive Bond Strength	15.9 MPa	2300 psi	Lap shear, alum to alum, 1 hr @ 65°C
	19.3 MPa	2800 psi	Lap shear, alum to alum, 4 hrs @ 65°C

Thermal Properties	Metric	English	Comments
CTE, linear	55.0 µm/m-°C @Temperature 20.0 °C	30.6 µin/in-°F @Temperature 68.0 °F	
Maximum Service Temperature, Air	140 °C	284 °F	
Minimum Service Temperature, Air	-70.0 °C	-94.0 °F	
Glass Transition Temp, Tg	120 °C	248 °F	Ultimate Tg

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

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+14 ohm-cm	2.00e+14 ohm-cm	
Dielectric Constant	4.3	4.3	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	16.5 kV/mm	420 kV/in	
Dissipation Factor	0.020	0.020	
	@Frequency 1000 Hz	@Frequency 1000 Hz	

Processing Properties	Metric	English	Comments
Cure Time	60.0 - 240 min	1.00 - 4.00 hour	
	@Temperature 65.0 °C	@Temperature 149 °F	
	1440 min	24.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	20 min	20 min	

Descriptive Properties	Value	Comments
Color	Clear	
Cytotoxicity Study	Passes	ISO 10993-5, elution method
Mix Ratio, parts by weight	100/25	Resin/Hardener
Thixotropic Index	1	

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