

Tra-Con Tra-Cast 3108 General Purpose Epoxy Casting Compound

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-CAST 3108 is a low viscosity two-part formulation recommended for underfill and encapsulating applications where the combination of good mechanical thermal and electrical properties are required. It is an all liquid system with excellent flow and wetting characteristics, exhibits superior adhesion to glass, ceramics, most metals, many plastics (includes potting shells) and other electronic materials, contains no solvents, and is easily mixed, handled and cured with minimum shrinkage at room temperatures. The fully cured TRA-CAST 3108 is an electrical insulator with good impact and thermal shock resistance. It is further resistant to water, weather, gases, galvanic action, petroleum fuels and solvents, alcohol, salts and many acids and alkalis. This adhesive complies with the requirements of NASA Outgassing Specification when tested according to ASTM E-595-90. Information provided by Tra-Con Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Tra-Con-Tra-Cast-3108-General-Purpose-Epoxy-Casting-Compound.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.70 g/cc	1.70 g/cc	Mixed
Solids Content	100 %	100 %	Reactive Solids Content
Volatile Organic Compounds (VOC) Content	4.27 g/l	4.27 g/l	
Water Absorption	0.080 %	0.080 %	After 24 hours
Viscosity	4000 cP @Temperature 25.0 °C	4000 cP @Temperature 77.0 °F	Mixed (10 rpm)

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	92	92	
Adhesive Bond Strength	8.62 MPa	1250 psi	Lap shear, alum to alum, 24 hrs @ 25°C
	20.3 MPa	2950 psi	Lap shear, alum to alum, 2 hrs @ 65°C

Thermal Properties	Metric	English	Comments
CTE, linear	35.0 µm/m-°C @Temperature 20.0 °C	19.4 µin/in-°F @Temperature 68.0 °F	
Maximum Service Temperature, Air	145 °C	293 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	
Glass Transition Temp, Tg	76.0 °C	169 °F	Ultimate Tg

Electrical Properties	Metric	English	Comments
Volume Resistivity	4.00e+16 ohm-cm	4.00e+16 ohm-cm	
	4.00e+14 ohm-cm	4.00e+14 ohm-cm	
	@Temperature 100 °C	@Temperature 212 °F	

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	30 min	30 min	

Descriptive Properties	Value	Comments
Color	Gray	
Heat Distortion Temperature °C	102	
Mix Ratio, parts by weight	100/12	Resin/Hardener
Outgassing, NASA, %CVCM	0.01	2 hrs @ 65°C
Outgassing, NASA, %TWL	0.13	2 hrs @ 65°C
Thixotropic Index	1.6	6 rpm/60 rpm

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