

Tra-Con Tra-Cast 3156 General Purpose Epoxy Casting System

Category : Polymer , Adhesive , Thermoset , Epoxy

Material Notes:

TRA-CAST 3156 is an easy-to-use, low cost, versatile epoxy resin and hardener system developed for general purpose casting applications. It develops excellent adhesion to most metals, plastics, and ceramics, and is recommended for electrical and structural potting and encapsulating applications where the combination of good mechanical, thermal, electrical and room temperature cure properties are required. Fully cured TRA-CAST 3156 is a strong, tough, electrical insulator with high heat stability and a low thermal coefficient of expansion that provides successful performance over a wide temperature range. It is resistant to industrial environments that include water, weather, galvanic action, petroleum fuels, lubricants and solvents, gases and vapors, many 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-Cast-3156-General-Purpose-Epoxy-Casting-System.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.50 g/cc	1.50 g/cc	Mixed
Volatile Organic Compounds (VOC) Content	4.45 g/l	4.45 g/l	
Water Absorption	0.50 %	0.50 %	After 24 hours
Viscosity	24500 cP @Temperature 25.0 °C	24500 cP @Temperature 77.0 °F	Mixed (sp #7, 10 rpm)

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	87	87	
Tensile Strength, Yield	84.8 MPa	12300 psi	
Compressive Strength	112 MPa	16200 psi	
Adhesive Bond Strength	8.62 MPa	1250 psi	Lap shear, alum to alum, 24 hrs @ 25°C
	9.31 MPa	1350 psi	Lap shear, alum to alum, 4 hrs @ 25°C + 2 hrs @ 65°C

Thermal Properties	Metric	English	Comments
CTE, linear	87.1 µm/m-°C	48.4 µin/in-°F	Below Tg
	210 µm/m-°C	117 µin/in-°F	Above Tg
Maximum Service Temperature, Air	155 °C	311 °F	
Minimum Service Temperature, Air	-60.0 °C	-76.0 °F	

Thermal Properties	Metric	English	Comments
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Electrical Properties	Metric	English	Comments
Volume Resistivity	6.50e+15 ohm-cm	6.50e+15 ohm-cm	
Dielectric Constant	3.9	3.9	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	4.6	4.6	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	17.7 kV/mm	450 kV/in	
Dissipation Factor	0.010	0.010	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.020	0.020	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Processing Properties	Metric	English	Comments
Cure Time	360 min	6.00 hour	4 hrs @ 25°C + 2 hrs @ 65°C
	1440 min	24.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	25 min	25 min	25 grams
	45 min	45 min	100 grams

Descriptive Properties	Value	Comments
Color	Black	
Heat Distortion Temperature °C	105	
Working Life hours	1.5	100 grams

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