Resinlab® EP691 Black Unfilled Electronic Grade Epoxy Encapsulant

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin , Epoxy Encapsulant, Unreinforced

Material Notes:

Resinlab™ EP 691 Black is a two part unfilled electronic grade epoxy encapsulant designed for medium sized castings. It cures at room temperature to a tough, semi-rigid polymer. It has good wetting and adhesion to most surfaces and is free flowing to penetrate voids and give good air release and a smooth high gloss surface. It has very good resistance to water, acids and bases and most organic solvents. It was especially formulated to a 2A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. EP 691 Black will reach full cure at room temperature within 24 hours. Cure time can be accelerated by the application of heat after product has gelled. Times and temperatures from 1 hour at 65°C to 20 minutes at 100°C are typical for small castings (less than 50 grams).Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Resinlab-EP691-Black-Unfilled-Electronic-Grade-Epoxy-Encapsulant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.00 g/cc	1.00 g/cc	Part B
	1.11 g/cc	1.11 g/cc	Mixed
	1.16 g/cc	1.16 g/cc	Part A
Viscosity	2500 cP	2500 cP	Part B
	9000 cP	9000 cP	Mixed
	16000 cP	16000 cP	Part A

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	
Tensile Strength, Ultimate	58.6 MPa	8500 psi	
Tensile Strength, Yield	44.8 MPa	6500 psi	
Elongation at Break	5.0 - 10 %	5.0 - 10 %	
Elongation at Yield	1.0 - 2.0 %	1.0 - 2.0 %	
Tensile Modulus	2.76 GPa	400 ksi	
Compressive Yield Strength	75.8 MPa	11000 psi	
Compressive Strength	186 MPa	27000 psi	Ultimate
Compressive Modulus	2.90 GPa	420 ksi	
Adhesive Bond Strength	13.8 MPa	2000 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe

Mechanical Properties	Metric	English	Comments

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 µm/m-°C	33.3 µin/in-°F	
Thermal Conductivity	0.140 W/m-K	0.972 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	121 °C	250 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	80.0 °C	176 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.00e+14 ohm-cm	8.00e+14 ohm-cm	
Dielectric Constant	4.2 @Frequency 100 Hz, Temperature 25.0 °C	4.2 @Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	16.1 kV/mm	410 kV/in	

Processing Properties	Metric	English	Comments
Pot Life	>= 120 min	>= 120 min	Mass: 50g

Descriptive Properties	Value	Comments
Color	Black	
Mix Ratio	100:45	Weight
	2:1	Volume

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