

Resinlab® EP965SC-7 Clear Unfilled Electronic Grade Epoxy Encapsulant

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

Material Notes:

Resinlab™ EP965SC-7 Clear 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 1A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. EP965SC-7 Clear 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 110°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-EP965SC-7-Clear-Unfilled-Electronic-Grade-Epoxy-Encapsulant.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.980 g/cc	0.980 g/cc	Part B; TM R050-16
	1.07 g/cc	1.07 g/cc	Mixed; TM R050-16
	1.16 g/cc	1.16 g/cc	Part A; TM R050-16
Water Absorption	0.43 %	0.43 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	3000 cP	3000 cP	Part B, RVT, #5, 20 rpm; TM R050-12
	8000 cP	8000 cP	Mixed; TM R050-12
	16000 cP	16000 cP	Part A, RVT, #6, 20 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	TM R050-17
Tensile Strength at Break	46.9 MPa	6800 psi	TM R050-36
Tensile Strength, Ultimate	51.7 MPa	7500 psi	TM R050-36
Tensile Strength, Yield	27.6 MPa	4000 psi	TM R050-36
Elongation at Break	3.0 - 6.0 %	3.0 - 6.0 %	TM R050-36
Tensile Modulus	2.59 GPa	375 ksi	TM R050-36
Compressive Yield Strength	58.6 MPa	8500 psi	TM R050-38
Compressive Strength	148 MPa	21500 psi	Ultimate; TM R050-38

Mechanical Properties	148 MPa Metric	21500 psi English	Break: TM R050-38 Comments
Compressive Modulus	1.38 GPa	200 ksi	TM R050-38
Adhesive Bond Strength	17.2 MPa	2500 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37

Thermal Properties	Metric	English	Comments
CTE, linear	50.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	27.8 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
Thermal Conductivity	0.140 W/m-K	0.972 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	150 °C	302 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	68.0 °C	154 °F	TM R050-25

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

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	45 - 60 min	45 - 60 min	Mass: 50g; TM R050-19

Descriptive Properties	Value	Comments
Color	Clear	
Mix Ratio	1:1	Volume
	100:85	Weight

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