

Resinlab® SEC1222 Silver Filled Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy Adhesive

Material Notes:

Resinlab™ SEC1222 is a silver filled, two component, room temperature curing epoxy adhesive. It is designed to cure completely at room temperature. SEC1222 provides excellent electrical conductivity useful in many electronic applications. It is a soft 100% solids thixotropic paste provided in a 1:1 ratio. It is recommended to mix by weight but extrusion of equal length beads from syringes is commonly used as a method of measurement as small quantities are commonly used. SEC1222 provides exceptionally high conductivity starting immediately after mixing and improves as the curing process proceeds. It also has the additional benefit of very high thermal conductivity due to its high silver loading. It gives good environmental protection while having tenacious adhesion to various metals and other common assembly materials. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-SEC1222-Silver-Filled-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	3.90 g/cc	3.90 g/cc	Mixed; TM R050-16
Water Absorption	<= 0.10 %	<= 0.10 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	54250 cP	54250 cP	10.0 rpm; TM R050-12
	162500 cP	162500 cP	5.0 rpm; TM R050-12
	318500 cP	318500 cP	Mixed, 2.5 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	TM R050-17
Tensile Strength at Break	6.55 MPa	950 psi	TM R050-36
Tensile Strength, Ultimate	6.89 MPa	1000 psi	TM R050-36
Tensile Strength, Yield	6.89 MPa	1000 psi	TM R050-36
Elongation at Break	3.0 - 5.0 %	3.0 - 5.0 %	TM R050-36
Tensile Modulus	0.345 GPa	50.0 ksi	TM R050-36
Compressive Yield Strength	10.3 MPa	1500 psi	TM R050-38
Compressive Strength	65.5 MPa	9500 psi	Break; TM R050-38
	68.9 MPa	10000 psi	Ultimate; TM R050-38
Compressive Modulus	0.448 GPa	65.0 ksi	TM R050-38

Mechanical Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	53.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	29.4 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	below Tg
	@Temperature $\leq 34.0^{\circ}\text{C}$	@Temperature $\leq 93.2^{\circ}\text{F}$	
	110 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	61.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	above Tg
	@Temperature $\geq 34.0^{\circ}\text{C}$	@Temperature $\geq 93.2^{\circ}\text{F}$	
Thermal Conductivity	1.60 W/m-K	11.1 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	34.0 °C	93.2 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	0.00089 ohm-cm	0.00089 ohm-cm	Cured: 1 hour at 60°C
	0.0014 ohm-cm	0.0014 ohm-cm	Cured: 24 hours at 25°C
	0.0030 ohm-cm	0.0030 ohm-cm	Cured: 8 hours at 25°C

Processing Properties	Metric	English	Comments
Cure Time	60.0 min	1.00 hour	
	@Temperature 60.0 °C	@Temperature 140 °F	
	1440 - 4320 min	24.0 - 72.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	45 min	45 min	Mass: 5g; TM R050-19

Descriptive Properties	Value	Comments
Color	Silver	

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