

Resinlab® EP1310 Medium Reactivity Epoxy Encapsulant

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

Material Notes:

Resinlab™ EP1310 is a two part medium reactivity epoxy encapsulant capable of being quickly gelled prior to full cure by exposing to a UV light source. Usually 5- 10 seconds is sufficient to gel the top layer of the product. Full cure will occur over time at room temperature even in shadow areas. Due to the acrylate reaction, the catalyzed resin warms slightly to about 32oC nearly instantaneously. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-EP1310-Medium-Reactivity-Epoxy-Encapsulant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.03 g/cc	1.03 g/cc	Part B; TM R050-16
	1.10 g/cc	1.10 g/cc	Mixed; TM R050-16
	1.14 g/cc	1.14 g/cc	Part A; TM R050-16
Water Absorption	0.30 %	0.30 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	1500 cP	1500 cP	Part B, RVT, #2, 20 rpm; TM R050-12
	3000 cP	3000 cP	Mixed; TM R050-12
	3500 cP	3500 cP	Part A, RVT, #3, 20 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	TM R050-17
Tensile Strength at Break	31.0 MPa	4500 psi	TM R050-36
Tensile Strength, Ultimate	31.7 MPa	4600 psi	TM R050-36
Tensile Strength, Yield	20.7 MPa	3000 psi	TM R050-36
Elongation at Break	2.0 - 3.0 %	2.0 - 3.0 %	TM R050-36
Tensile Modulus	2.07 GPa	300 ksi	TM R050-36
Compressive Yield Strength	41.4 MPa	6000 psi	TM R050-38
Compressive Strength	103 MPa	15000 psi	Break; TM R050-38
	138 MPa	20000 psi	Ultimate; TM R050-38
Compressive Modulus	2.07 GPa	300 ksi	TM R050-38

Adhesive Bond Strength Mechanical Properties	20.7 MPa Metric	3000 psi English	Lap shear: 2024 T3 Al Abraded / MEK Wipe: TM R050-37
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Thermal Properties	Metric	English	Comments
CTE, linear	55.0 µm/m-°C	30.6 µin/in-°F	
Thermal Conductivity	0.140 W/m-K	0.972 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	150 °C	302 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	54.0 °C	129 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+13 ohm-cm	2.00e+13 ohm-cm	
Dielectric Constant	4.5	4.5	
	@Frequency 100 Hz, Temperature 25.0 °C	@Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	17.3 kV/mm	440 kV/in	

Processing Properties	Metric	English	Comments
Pot Life	15 - 30 min	15 - 30 min	Mass: 50g; TM R050-19

Descriptive Properties	Value	Comments
Color	Clear	
Mix Ratio	2:1	Volume
	215:100	Weight

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