

Resinlab® EP1056LC Urethane Modified Epoxy Adhesive

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

Material Notes:

Resinlab™ EP1056LC is a two part urethane modified epoxy adhesive designed to give good adhesion to metals and hard to bond surfaces such as PVC. It is thixotropic to provide good gap filling ability and prevent running and sagging during cure. It has very good resistance to water, acids and bases and most organic solvents. It was especially formulated to a 2A:1B mix ratio for use in automatic mixing equipment and dispensers with static mixers. EP1056LC will reach handle cure at room temperature within 8 – 16 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 2 hours at 65°C to 10 minutes at 100°C are typical for most applications. Time to heat substrate must be taken into account. Cooler temperatures will also extend work time and increase cure times. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-EP1056LC-Urethane-Modified-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.970 g/cc	0.970 g/cc	Part B; TM R050-16
	1.10 g/cc	1.10 g/cc	Mixed; TM R050-16
	1.17 g/cc	1.17 g/cc	Part A; TM R050-16
Water Absorption	0.12 %	0.12 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	4000 cP	4000 cP	Part B, RVT, #4, 2.5 rpm; TM R050-12
	165000 cP	165000 cP	Mixed; TM R050-12
	325000 cP	325000 cP	Part A, RVT, #7, 2.5 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	TM R050-17
Tensile Strength at Break	34.5 MPa	5000 psi	TM R050-36
Tensile Strength, Ultimate	34.5 MPa	5000 psi	TM R050-36
Tensile Strength, Yield	10.3 MPa	1500 psi	TM R050-36
Elongation at Break	2.0 - 3.0 %	2.0 - 3.0 %	TM R050-36
Tensile Modulus	2.41 GPa	350 ksi	TM R050-36
Compressive Yield Strength	58.6 MPa	8500 psi	TM R050-38
Compressive Strength	114 MPa	16500 psi	Break; TM R050-38

Mechanical Properties	117 MPa Metric	17000 psi English	Ultimate TM R050-38 Comments
Compressive Modulus	2.34 GPa	340 ksi	TM R050-38
Adhesive Bond Strength	24.1 MPa	3500 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37

Thermal Properties	Metric	English	Comments
CTE, linear	55.0 µm/m-°C	30.6 µin/in-°F	
Thermal Conductivity	0.160 W/m-K	1.11 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	50.0 °C	122 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.00e+14 ohm-cm	8.00e+14 ohm-cm	
Dielectric Constant	4.5 @Frequency 100 Hz, Temperature 25.0 °C	4.5 @Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	16.1 kV/mm	410 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	120 min @Temperature 65.0 °C	2.00 hour @Temperature 149 °F	
	1440 - 4320 min @Temperature 25.0 °C	24.0 - 72.0 hour @Temperature 77.0 °F	
Pot Life	30 min	30 min	Mass: 50g; TM R050-19

Descriptive Properties	Value	Comments
Color	Black	
Mix Ratio	2:1	Volume
	245:100	Weight

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