

Resinlab® EP1306 Acrylic / Epoxy Hybrid Adhesive

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

Material Notes:

EP1306 is a two part acrylic / epoxy hybrid adhesive utilizing a 50% weight loading of aluminum powder into both components. It cures quickly at room temperature to a tough, rigid polymer. It has good wetting and adhesion to most surfaces and is free flowing to penetrate voids and give good air release. 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 or meter/mix and dispense equipment. EP1306 will reach full cure at room temperature within 16 - 24 hours. Cure time can be accelerated by the application of heat after product has gelled. Times and temperatures from 30 minutes at 60°C to 10 minutes at 100°C are typical. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-EP1306-Acrylic-Epoxy-Hybrid-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.50 g/cc	1.50 g/cc	Part B; TM R050-16
	1.58 g/cc	1.58 g/cc	Mixed; TM R050-16
	1.62 g/cc	1.62 g/cc	Part A; TM R050-16
Water Absorption	0.090 %	0.090 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	300000 cP	300000 cP	Part B, RVT, #7, 2.5 rpm; TM R050-12
	350000 cP	350000 cP	Mixed; TM R050-12
	375000 cP	375000 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	42.7 MPa	6200 psi	TM R050-36
Tensile Strength, Ultimate	46.9 MPa	6800 psi	TM R050-36
Tensile Strength, Yield	31.0 MPa	4500 psi	TM R050-36
Elongation at Break	0.00 - 1.0 %	0.00 - 1.0 %	TM R050-36
Tensile Modulus	5.17 GPa	750 ksi	TM R050-36
Compressive Yield Strength	62.1 MPa	9000 psi	TM R050-38
Compressive Strength	138 MPa	20000 psi	Break; TM R050-38

Mechanical Properties	159 MPa Metric	23000 psi English	Ultimate: TM R050-38 Comments
Compressive Modulus	3.10 GPa	450 ksi	TM R050-38
Adhesive Bond Strength	27.6 MPa	4000 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37

Thermal Properties	Metric	English	Comments
CTE, linear	47.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	26.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	
Thermal Conductivity	3.22 W/m-K	22.3 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	62.0 °C	144 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.00e+12 ohm-cm	8.00e+12 ohm-cm	
Dielectric Constant	9.5	9.5	
	@Frequency 100 Hz, Temperature 25.0 °C	@Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	4.33 kV/mm	110 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min	1.00 hour	
	@Temperature 60.0 °C	@Temperature 140 °F	
	1440 min	24.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	60 - 90 min	60 - 90 min	Mass: 50g; TM R050-19

Descriptive Properties	Value	Comments
Color	Gray	
Mix Ratio	2:1	Weight and Volume

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