

Resinlab® EP1199 Clear Unfilled Epoxy Adhesive

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

Material Notes:

Resinlab™ EP1199 Clear is a two part unfilled epoxy adhesive designed for bonding of metals, ceramics and most plastics. This product gives good resistance to water, salt spray, inorganic acids and bases and most organic solvents. This product gives better water and temperature resistance than standard 5 minute epoxy. It was especially formulated to a 1:1 mix ratio for use in either MMD equipment or side by side dual cartridges for easy dispensing. A handling cure is normally achieved at room temperature within 30 - 60 minutes with full cure in 24 hours. An elevated temperature cure schedule can be used to reach final properties quickly. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-EP1199-Clear-Unfilled-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.970 g/cc	0.970 g/cc	Part B; TM R050-16
	1.06 g/cc	1.06 g/cc	Mixed; TM R050-16
	1.16 g/cc	1.16 g/cc	Part A; TM R050-16
Water Absorption	0.28 %	0.28 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	3000 cP	3000 cP	Part B, RVT, #4, 2.5 rpm; TM R050-12
	9000 cP	9000 cP	Mixed; TM R050-12
	15000 cP	15000 cP	Part A, RVT, #5, 2.5 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	TM R050-17
Tensile Strength at Break	27.6 MPa	4000 psi	TM R050-36
Tensile Strength, Ultimate	37.9 MPa	5500 psi	TM R050-36
Tensile Strength, Yield	24.1 MPa	3500 psi	TM R050-36
Elongation at Break	10 - 20 %	10 - 20 %	TM R050-36
Tensile Modulus	2.21 GPa	320 ksi	TM R050-36
Compressive Yield Strength	65.5 MPa	9500 psi	TM R050-38
Compressive Strength	138 MPa	20000 psi	Ultimate; TM R050-38
	138 MPa	20000 psi	Break; TM R050-38

Mechanical Properties	Metric ^{Pa}	English	Comments
Adhesive Bond Strength	10.3 MPa	1500 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37
Peel Strength	0.526 - 0.877 kN/m	3.00 - 5.00 pli	

Thermal Properties	Metric	English	Comments
CTE, linear	50.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	27.8 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
Maximum Service Temperature, Air	150 $^{\circ}\text{C}$	302 $^{\circ}\text{F}$	
Minimum Service Temperature, Air	-40.0 $^{\circ}\text{C}$	-40.0 $^{\circ}\text{F}$	
Glass Transition Temp, Tg	82.0 $^{\circ}\text{C}$	180 $^{\circ}\text{F}$	TM R050-25

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

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	
Dielectric Constant	3.0	3.0	
	@Frequency 100 Hz, Temperature 25.0 $^{\circ}\text{C}$	@Frequency 100 Hz, Temperature 77.0 $^{\circ}\text{F}$	
Dielectric Strength	16.5 kV/mm	420 kV/in	

Processing Properties	Metric	English	Comments
Pot Life	8.0 - 12 min	8.0 - 12 min	Mass: 50g; TM R050-19

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

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