

Resinlab® EP1026 Black Epoxy Adhesive

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

Material Notes:

Resinlab™ EP1026 Black is a two part unfilled epoxy adhesive designed for high speed bonding of metals, ceramics, and most plastics. It cures to a tough semi-rigid material, and is free flowing in viscosity. It gives good resistance to water, salt spray, inorganic acids and bases, and most organic solvents. 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 20-30 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-EP1026-Black-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.12 g/cc	1.12 g/cc	Part B; TM R050-16
	1.14 g/cc	1.14 g/cc	Mixed; TM R050-16
	1.16 g/cc	1.16 g/cc	Part A; TM R050-16
Water Absorption	1.56 %	1.56 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	15000 cP	15000 cP	Part B, RVT, #7, 2.5 rpm; TM R050-12
	15500 cP	15500 cP	Mixed; TM R050-12
	16000 cP	16000 cP	Part A, RVT, #6, 2.5 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	TM R050-17
Tensile Strength at Break	44.8 MPa	6500 psi	TM R050-36
Tensile Strength, Ultimate	51.7 MPa	7500 psi	TM R050-36
Tensile Strength, Yield	27.6 MPa	4000 psi	TM R050-36
Elongation at Break	10 - 20 %	10 - 20 %	TM R050-36
Tensile Modulus	3.10 GPa	450 ksi	TM R050-36
Compressive Yield Strength	27.6 MPa	4000 psi	TM R050-38
Compressive Strength	>= 193 MPa	>= 28000 psi	Ultimate; TM R050-38
	>= 193 MPa	>= 28000 psi	Break; TM R050-38

Mechanical Properties	Metric ^{Pa}	English	Comments
Adhesive Bond Strength	17.2 MPa	2500 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	33.3 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	below Tg
	@Temperature ≤ 34.0 $^{\circ}\text{C}$	@Temperature ≤ 93.2 $^{\circ}\text{F}$	
	209 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	116 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	above Tg
	@Temperature ≥ 34.0 $^{\circ}\text{C}$	@Temperature ≥ 93.2 $^{\circ}\text{F}$	
Thermal Conductivity	0.185 W/m-K	1.28 BTU-in/hr-ft ² - $^{\circ}\text{F}$	
Maximum Service Temperature, Air	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	
Minimum Service Temperature, Air	-40.0 $^{\circ}\text{C}$	-40.0 $^{\circ}\text{F}$	
Glass Transition Temp, Tg	34.0 $^{\circ}\text{C}$	93.2 $^{\circ}\text{F}$	TM R050-25

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

Processing Properties	Metric	English	Comments
Pot Life	3.0 - 5.0 min	3.0 - 5.0 min	Mass: 25g; TM R050-19

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

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