

Resinlab® EP1290 Gray Mineral Filled Epoxy Adhesive

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

Material Notes:

Resinlab™ EP1290 Gray is a two part mineral filled epoxy adhesive designed for bonding metals and plastics. It cures at room temperature to a tough, semi-flexible material. It has good wetting to most surfaces and is free flowing to penetrate cavities and give good self leveling and air release. This product gives very good vibration and impact resistance. It gives good resistance to water, salt spray, inorganic acids and bases and most organic solvents. It was especially formulated to a 1A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. EP1290 Gray will reach handle cure at room temperature within 16 – 24 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 2 hours at 65°C to 20 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-EP1290-Gray-Mineral-Filled-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.35 g/cc	1.35 g/cc	Part B; TM R050-16
	1.36 g/cc	1.36 g/cc	Mixed; TM R050-16
	1.37 g/cc	1.37 g/cc	Part A; TM R050-16
Water Absorption	0.17 %	0.17 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	7500 cP	7500 cP	Part B, RVT, #7, 2.5 rpm; TM R050-12
	30000 cP	30000 cP	Mixed; TM R050-12
	50000 cP	50000 cP	Part A, RVT, #7, 2.5 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	60	60	TM R050-17
Tensile Strength at Break	11.0 MPa	1600 psi	TM R050-36
Tensile Strength, Ultimate	11.0 MPa	1600 psi	TM R050-36
Tensile Strength, Yield	1.38 MPa	200 psi	TM R050-36
Elongation at Break	40 - 50 %	40 - 50 %	TM R050-36
Tensile Modulus	0.0345 - 0.0689 GPa	5.00 - 10.0 ksi	TM R050-36
Compressive Yield Strength	13.8 MPa	2000 psi	TM R050-38
Compressive Strength			Break; TM R050-38

Mechanical Properties	134 MPa Metric	19500 psi English	Comments
	138 MPa	20000 psi	Ultimate; TM R050-38
Compressive Modulus	0.0896 - 0.124 GPa	13.0 - 18.0 ksi	TM R050-38
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	86.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	47.8 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	below Tg
	@Temperature ≤ 31.0 $^{\circ}\text{C}$	@Temperature ≤ 87.8 $^{\circ}\text{F}$	
	166 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	92.2 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	above Tg
	@Temperature ≥ 31.0 $^{\circ}\text{C}$	@Temperature ≥ 87.8 $^{\circ}\text{F}$	
Thermal Conductivity	0.140 W/m-K	0.972 BTU-in/hr-ft ² - $^{\circ}\text{F}$	
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	31.0 $^{\circ}\text{C}$	87.8 $^{\circ}\text{F}$	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.00e+12 ohm-cm	5.00e+12 ohm-cm	
Dielectric Constant	6.5	6.5	
	@Frequency 100 Hz, Temperature 25.0 $^{\circ}\text{C}$	@Frequency 100 Hz, Temperature 77.0 $^{\circ}\text{F}$	
Dielectric Strength	33.5 kV/mm	850 kV/in	

Processing Properties	Metric	English	Comments
Pot Life	≥ 120 min	≥ 120 min	Mass: 50g; TM R050-19

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

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