

Resinlab® EP1305LV Clear Epoxy Casting Resin

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

Material Notes:

Resinlab™ EP1305LV Clear is a black two-part epoxy casting resin designed to give good adhesion to metals and especially PVC. It has good wetting to most surfaces and is free flowing to penetrate components and give good selfleveling and air release. It has very good resistance to water, acids and bases, and most organic solvents. It was especially formulated to a 1A:1B mix ratio for use in automatic mixing equipment and dispensers with static mixers. EP1305LV Clear will reach handle cure at room temperature within 2 – 4 hours, full cure in 24 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 2 hours at 65°C to 1 hours at 100°C are typical for most applications. 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-EP1305LV-Clear-Epoxy-Casting-Resin.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.00 g/cc	1.00 g/cc	Part B; TM R050-16
	1.06 g/cc	1.06 g/cc	Mixed; TM R050-16
	1.15 g/cc	1.15 g/cc	Part A; TM R050-16
Water Absorption	0.56 %	0.56 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	20000 cP	20000 cP	Part B, RVT, #7, 20 rpm; TM R050-12
	30000 cP	30000 cP	Mixed; TM R050-12
	45000 cP	45000 cP	Part A, RVT, #7, 20 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	70	70	TM R050-17
Tensile Strength at Break	20.7 - 24.1 MPa	3000 - 3500 psi	TM R050-36
Tensile Strength, Ultimate	20.7 - 24.1 MPa	3000 - 3500 psi	TM R050-36
Tensile Strength, Yield	12.4 MPa	1800 psi	TM R050-36
Elongation at Break	35 - 50 %	35 - 50 %	TM R050-36
Tensile Modulus	0.621 GPa	90.0 ksi	TM R050-36
Compressive Yield Strength	17.2 MPa	2500 psi	TM R050-38
Compressive Strength	110 MPa	16000 psi	Break; TM R050-38

Mechanical Properties	114 MPa Metric	16500 psi English	Ultimate: TM R050-38 Comments
Compressive Modulus	1.03 GPa	150 ksi	TM R050-38
Adhesive Bond Strength	13.8 MPa	2000 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 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
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	50.0 $^\circ\text{C}$	122 $^\circ\text{F}$	TM R050-25

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

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.70e+15 ohm-cm	5.70e+15 ohm-cm	
Dielectric Constant	4.2	4.2	
	@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	15 min	15 min	Mass: 50g; TM R050-19

Descriptive Properties	Value	Comments
Color	Clear	
Mix Ratio	1:1	Volume
	100:87	Weight

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