

Resinlab® EP1296 Highly Filled, Moderately Thixotropic Black Casting Resin

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

Material Notes:

Resinlab™ EP1296 is a highly filled, moderately thixotropic black casting resin designed for applications requiring good thermal conductivity, low shrinkage and a low CTE. It was especially formulated to a 1:1 mix ratio for use in MMD equipment or side-by-side cartridges. It contains fillers, which are low in abrasive character to minimize wear considerations for wetted components. It shows very good stability in side-by-side cartridges. Cure is normally achieved at room temperature although an elevated cure schedule can be used to reach final properties quickly. This product was designed to be cured in less than 1 hour at 60°C for ease of processing and also to reduce viscosity. Times and temperatures from 1 hour at 60°C to 15 minutes at 100°C are typical for small castings (less than 50 grams). Heat should be applied after product has gelled. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-EP1296-Highly-Filled-Moderately-Thixotropic-Black-Casting-Resin.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.48 g/cc	1.48 g/cc	Part B; TM R050-16
	1.54 g/cc	1.54 g/cc	Mixed; TM R050-16
	1.59 g/cc	1.59 g/cc	Part A; TM R050-16
Water Absorption	0.38 %	0.38 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	5500 cP	5500 cP	Part B, RVT, #3, 2.5 rpm; TM R050-12
	7500 cP	7500 cP	Mixed; TM R050-12
	10000 cP	10000 cP	Part A, RVT, #6, 2.5 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	TM R050-17
Tensile Strength at Break	20.7 MPa	3000 psi	TM R050-36
Tensile Strength, Ultimate	20.7 MPa	3000 psi	TM R050-36
Tensile Strength, Yield	5.52 MPa	800 psi	TM R050-36
Elongation at Break	1.0 - 3.0 %	1.0 - 3.0 %	TM R050-36
Tensile Modulus	2.76 GPa	400 ksi	TM R050-36
Compressive Yield Strength	34.5 MPa	5000 psi	TM R050-38
Compressive Strength	48.3 MPa	7000 psi	Break; TM R050-38

Mechanical Properties	55.2 MPa Metric	8000 psi English	Ultimate™ TM R050-38 Comments
Compressive Modulus	2.07 GPa	300 ksi	TM R050-38
Adhesive Bond Strength	7.58 MPa	1100 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37

Thermal Properties	Metric	English	Comments
CTE, linear	52.0 µm/m-°C	28.9 µin/in-°F	
Thermal Conductivity	0.630 W/m-K	4.37 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	150 °C	302 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	36.0 °C	96.8 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.40e+13 ohm-cm	2.40e+13 ohm-cm	
Dielectric Constant	4.7	4.7	
	@Frequency 100 Hz, Temperature 25.0 °C	@Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	15.7 kV/mm	400 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min	1.00 hour	
	@Temperature 60.0 °C	@Temperature 140 °F	
	1440 - 4320 min	24.0 - 72.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	60 - 90 min	60 - 90 min	Mass: 100g; TM R050-19

Descriptive Properties	Value	Comments
Color	Black	
Mix Ratio	1:1	Volume
	105:100	Weight

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