

Resinlab® EP1295 Black Medium Viscosity, Halogen Free, Flame Retardant Epoxy Casting Resin

Category : Polymer , Thermoset , Epoxy , Epoxy Cure Resin

Material Notes:

Resinlab™ EP1295 Black is a medium viscosity, halogen free, flame retardant epoxy casting resin system. It is recognized under the Component Recognition Program of Underwriters Laboratories Inc., (File# E186034, Project 00NK02738) for UL Standard 94. EP1295 Black qualifies for a vertical burn rating of V-0 at 6.1 mm thickness. It also gives very good resistance to water, salt spray, inorganic acids and bases and most organic solvents. It cures quickly at room temperature to a tough, semi-rigid polymer. It has good wetting and adhesion to most surfaces and is free flowing to penetrate voids and give good air release. EP1295 Black was formulated to a 1/1 volume mix ratio for ease of use in automatic mixing equipment with static mixers. It contains soft, low-abrasion fillers which can separate over time, although they have good resistance to hard settling. If used in side-by-side cartridge format, they should be stored at 5C, rotating stock on a FIFO basis. EP1295 Black will generally reach handle cure at room temperature within 16 to 24 hours depending upon mass and ambient temperature. Full cure usually achieved within 48 – 72 hours. Cure time can be accelerated by the application of heat after product has gelled. Times and temperatures from 2 hours at 60°C to 30 minutes at 100°C are typical for most castings (less than 100 grams). Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-EP1295-Black-Medium-Viscosity-Halogen-Free-Flame-Retardant-Epoxy-Casting-Resin.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.32 g/cc	1.32 g/cc	Part B; TM R050-16
	1.39 g/cc	1.39 g/cc	Mixed; TM R050-16
	1.46 g/cc	1.46 g/cc	Part A; TM R050-16
Water Absorption	0.56 %	0.56 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	8500 cP	8500 cP	Part A, RVT, #4, 10 rpm; TM R050-12
	10000 cP	10000 cP	Mixed; TM R050-12
	13500 cP	13500 cP	Part B, RVT, #4, 10 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50	50	TM R050-17
Tensile Strength at Break	5.17 MPa	750 psi	TM R050-36
Tensile Strength, Ultimate	5.17 MPa	750 psi	TM R050-36
Tensile Strength, Yield	1.03 MPa	150 psi	TM R050-36

Elongation at Break Mechanical Properties	18 - 22 % Metric	18 - 22 % English	TM R050-36 Comments
Tensile Modulus	0.0207 - 0.0345 GPa	3.00 - 5.00 ksi	TM R050-36
Compressive Yield Strength	3.10 MPa	450 psi	TM R050-38
Compressive Strength	13.8 MPa	2000 psi	Break; TM R050-38
	34.5 MPa	5000 psi	Ultimate; TM R050-38
Compressive Modulus	0.0552 - 0.0689 GPa	8.00 - 10.0 ksi	TM R050-38
Adhesive Bond Strength	5.86 MPa	850 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37

Thermal Properties	Metric	English	Comments
CTE, linear	40.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	22.2 $\mu\text{in}/\text{in}\cdot\text{°F}$	
Thermal Conductivity	0.500 W/m-K	3.47 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	150 °C	302 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	27.0 °C	80.6 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.10e+15 ohm-cm	8.10e+15 ohm-cm	
Dielectric Constant	4.8 @Frequency 100 Hz, Temperature 25.0 °C	4.8 @Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	16.1 kV/mm	410 kV/in	

Processing Properties	Metric	English	Comments
Cure Time	120 min @Temperature 60.0 °C	2.00 hour @Temperature 140 °F	
	1440 - 2880 min @Temperature 25.0 °C	24.0 - 48.0 hour @Temperature 77.0 °F	
Pot Life	60 - 90 min	60 - 90 min	Mass: 150g; TM R050-19

Descriptive Properties	Value	Comments
Color	Black	

Mix Ratio Descriptive Properties	1.08:1 Value	Weight Comments
	1:1	Volume

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