

Resinlab® EP750 Clear Unfilled Epoxy Structural Adhesive

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

Material Notes:

Resinlab™ EP750 Clear is a two part unfilled epoxy structural adhesive which ingredients are listed in the Code of Federal Regulations Title 21 175.105 (Adhesives) and 175.300 (Resinous and polymeric coatings). It cures completely at room temperature to a tough, semi-rigid polymer. It has good wetting and adhesion to most surfaces and has a free flowing viscosity. It has very good resistance to water, 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. EP750 Clear will reach full cure at room temperature within 24 – 48 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 2 hours at 65°C to 10 minutes at 110°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-EP750-Clear-Unfilled-Epoxy-Structural-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.980 g/cc	0.980 g/cc	Part B; TM R050-16
	1.07 g/cc	1.07 g/cc	Mixed; TM R050-16
	1.16 g/cc	1.16 g/cc	Part A; TM R050-16
Water Absorption	0.060 %	0.060 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	9000 cP	9000 cP	Part B, RVT, #5, 2.5 rpm; TM R050-12
	12500 cP	12500 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	80	80	TM R050-17
Tensile Strength at Break	54.5 MPa	7900 psi	TM R050-36
Tensile Strength, Ultimate	55.2 MPa	8000 psi	TM R050-36
Tensile Strength, Yield	24.1 MPa	3500 psi	TM R050-36
Elongation at Break	4.0 - 10 %	4.0 - 10 %	TM R050-36
Tensile Modulus	2.41 GPa	350 ksi	TM R050-36
Compressive Yield Strength	58.6 MPa	8500 psi	TM R050-38
Compressive Strength			Ultimate; TM R050-38

Mechanical Properties	172 MPa Metric	25000 psi English	Comments
	172 MPa	25000 psi	Break; TM R050-38
Compressive Modulus	2.41 GPa	350 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	62.0 µm/m-°C	34.4 µin/in-°F	below Tg
	@Temperature <=70.0 °C	@Temperature <=158 °F	
	150 µm/m-°C	83.3 µin/in-°F	above Tg
	@Temperature >=70.0 °C	@Temperature >=158 °F	
Maximum Service Temperature, Air	150 °C	302 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	70.0 °C	158 °F	TM R050-25

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

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.30e+14 ohm-cm	8.30e+14 ohm-cm	
Dielectric Constant	3.5	3.5	
	@Frequency 100 Hz, Temperature 25.0 °C	@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	2.00 hour	
	@Temperature 65.0 °C	@Temperature 149 °F	
	1440 - 4320 min	24.0 - 72.0 hour	
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Pot Life	>= 120 min	>= 120 min	Mass: 50g; TM R050-19

Descriptive Properties	Value	Comments
Color	Clear	
Mix Ratio	1:1	Volume
	100:85	Weight

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