

Master Bond EP30LV Optically Clear, Low Viscosity Epoxy Adhesive

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

Material Notes:

Description: Master Bond Polymer System EP30LV is a low viscosity, two component epoxy adhesive for general purpose bonding, coating, sealing and casting formulated to cure at room temperature or more rapidly at elevated temperatures with a five (5) to one (1) mix ratio by weight. This adhesive is 100% reactive and does not contain any solvents or other volatiles. It is especially recommended where low viscosity is required for ease of application and bonded assemblies must exhibit superior dimensional stability. Linear shrinkage after cure is an exceptionally low 0.0003 inches/in. Master Bond Polymer System EP30LV produces high strength, rigid bonds which are resistant to chemicals including water, oil and most organic solvents, as well as cold sterilants, ETO and gamma radiation. Adhesion to both similar and dissimilar materials including metals, glass, ceramics, wood, vulcanized rubbers and many plastics is excellent. The hardened adhesive is an electrical insulator. The color of part A is clear and part B clear. Master Bond Polymer System EP30LV is widely used in electronic, electrical, computer, optical, metalworking, appliance, automotive and chemical industries. Product Advantages: Convenient mixing: easy-to-use mix ratio, five (5) to one (1) by weight. Exceptionally high physical strength properties . Easy application: contact pressure only required for cure, adhesive spreads readily. Versatile cure schedules: ambient temperature cures or fast, elevated temperature cures as required. High bonding strength to a wide variety of substrates. Superior dimensional stability and chemical resistance. Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP30LV-Optically-Clear-Low-Viscosity-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Water Absorption	<= 0.50 %	<= 0.50 %	7 days immersion
Viscosity	200 - 300 cP	200 - 300 cP	Part A
	300 - 400 cP	300 - 400 cP	Part B

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	>= 65.5 MPa	>= 9500 psi	
Tensile Modulus	>= 2.76 GPa	>= 400 ksi	
Shear Strength	>= 21.5 MPa	>= 3120 psi	Bond, Al to Al, after 30 days water absorption
	>= 22.1 MPa	>= 3200 psi	Bond, Al to Al

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	121 °C	250 °F	
Minimum Service Temperature, Air	-51.1 °C	-60.0 °F	

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

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.35	3.35	
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
	3.44	3.44	
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	
	3.55	3.55	
	@Frequency 60.0 Hz, Temperature 23.0 °C	@Frequency 60.0 Hz, Temperature 73.4 °F	
Dielectric Strength	17.3 kV/mm	440 kV/in	
Dissipation Factor	0.0050	0.0050	
	@Frequency 60.0 Hz, Temperature 23.0 °C	@Frequency 60.0 Hz, Temperature 73.4 °F	
	0.0060	0.0060	
	@Frequency 1000 Hz, Temperature 23.0 °C	@Frequency 1000 Hz, Temperature 73.4 °F	
	0.038	0.038	
	@Frequency 1.00e+6 Hz, Temperature 23.0 °C	@Frequency 1.00e+6 Hz, Temperature 73.4 °F	

Processing Properties	Metric	English	Comments
Cure Time	120 - 180 min	2.00 - 3.00 hour	
	@Temperature 100 °C	@Temperature 212 °F	
	960 - 1440 min	16.0 - 24.0 hour	
	@Temperature 40.0 °C	@Temperature 104 °F	
	1440 - 2160 min	24.0 - 36.0 hour	85% of maximum strength developed
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Pot Life	45 - 60 min	45 - 60 min	200 gram batch
	60 - 75 min	60 - 75 min	100 gram batch
	12.0 Month	12.0 Month	

Shelf Life Processing Properties	Metric @ Temperature 23.9 °C	English @ Temperature 75.0 °F	in unopened container Comments
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Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	5/1	by weight

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