

Master Bond EP42-2LV Epoxy Resists Heat and Chemicals

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

Material Notes:

Description: Master Bond Polymer System EP42-2LV is a low viscosity room temperature curable two component epoxy, adhesive, sealant, coating and casting material featuring outstanding chemical resistance. While EP42-2LV is a superior adhesive, sealant and coating, it is also castable to thicknesses exceeding 2-3 inches. EP42-2LV cures readily at ambient or more quickly at elevated temperatures. One particularly effective cure schedule is overnight at room temperature followed by 2-4 hours at 150-200°F. It has an easy to use 100 to 40 mix ratio by weight or 100 to 50 by volume. One salient property regarding this system is unlike most low viscosity, room temperature curing epoxies, EP42-2LV excels in chemical resistance. The cured material is resistant to various types of inorganic and organic acids, alkalis, solvents, aromatic hydrocarbons, fuels and oils. EP42-2LV is an excellent electrical insulator. Its serviceability from -60°F up to 300°F is especially noteworthy. Its low viscosity enables it to be particularly desirable for potting and encapsulations as well as coatings. Part A is clear in color and the color of Part B is amber. EP42-2LV is also used in aerospace, electronics, electrical, fiber-optic and optical as well as OEM type applications. Product Advantages: Convenient, non-critical 100 to 40 mix ratio by weight or 100 to 50 by volume. Contains no solvents or volatiles. Convenient cure schedules at both ambient and elevated temperatures. Excellent chemical resistance to acids, bases and many solvents. Castable to thicknesses up to 2-3 inches. Service temperature range of -60°F to 300°F. Bonds well to a wide variety of substrates. Outstanding physical strength properties. Especially noteworthy for combining low viscosity and exceptional chemical resistance. Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP42-2LV-Epoxy-Resists-Heat-and-Chemicals.php

Physical Properties	Metric	English	Comments
Viscosity	30 - 70 cP	30 - 70 cP	Part B
	10000 - 14000 cP	10000 - 14000 cP	Part A

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	>= 75	>= 75	
Tensile Strength at Break	>= 68.9 MPa	>= 10000 psi	
Elongation at Break	3.4 %	3.4 %	
Tensile Modulus	>= 2.76 GPa	>= 400 ksi	
Shear Strength	>= 13.8 MPa	>= 2000 psi	Tensile lap, Al to Al

Thermal Properties	Metric	English	Comments
CTE, linear	35.0 - 40.0 µm/m-°C	19.4 - 22.2 µin/in-°F	
Maximum Service Temperature, Air	149 °C	300 °F	
Minimum Service Temperature, Air	-51.1 °C	-60.0 °F	

Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{14}$ ohm-cm	$\geq 1.00 \times 10^{14}$ ohm-cm	
Dielectric Constant	3.8 @Frequency 60.0 Hz, Temperature 25.0 °C	3.8 @Frequency 60.0 Hz, Temperature 77.0 °F	

Processing Properties	Metric	English	Comments
Cure Time	120 - 180 min @Temperature 93.3 °C	2.00 - 3.00 hour @Temperature 200 °F	
	2880 - 4320 min @Temperature 23.9 °C	48.0 - 72.0 hour @Temperature 75.0 °F	
Pot Life	60 - 90 min	60 - 90 min	100 gram batch
Shelf Life	12.0 Month @Temperature 23.9 °C	12.0 Month @Temperature 75.0 °F	in original unopened container

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	100:40	by weight
	100:50	by volume

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