

Master Bond EP76M-F Electrically Conductive, Two Part Epoxy

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

Material Notes:

Description: Master Bond EP76M-F is a two component, nickel filled, electrically conductive epoxy system for high performance bonding, sealing, and coating formulated to cure at room temperature or more rapidly at elevated temperatures. The outstanding feature of EP76M-F focuses on the faster set up time and full cure of the system when compared to the more standard EP76M. However, it should be noted that EP76M-F has a more limited open time. Unlike the majority of two part nickel conductive systems, EP76M-F has a one to one mix ratio by weight or volume and has no solvents or diluents. It has a paste consistency and is easy to apply. The volume resistivity of the cured system is 5-10 ohm-cm. EP76M-F is particularly noteworthy for its strength profile along with good resistance to chemicals including water, oil, and many acids and bases. EP76M-F has a wide temperature range of -60°F to +250°F. Adhesion to metals, composites, ceramics, glass, vulcanized rubbers and many plastics is excellent. Parts A and B are both colored gray. Master Bond EP76M-F is widely used in the electronic, electrical, computer and related industries where shielding and static dissipation are prime requirements, along with faster curing times. **Product Advantages:** Convenient mixing: one to one by weight or volume; contains no volatiles. Easy application: contact pressure only required for cure; adhesive spreads evenly and smoothly. Versatile cure schedules; ambient temperature cures or fast elevated temperature cures as required. Good electrical and thermal conductivity. High bond strength to similar and dissimilar substrates. Bonds well to a wide variety of substrates, especially metals and composites. Faster set up and cure times. Information provided by MasterBond®

Order this product through the following link:

http://www.lookpolymers.com/polymer_Master-Bond-EP76M-F-Electrically-Conductive-Two-Part-Epoxy.php

Physical Properties	Metric	English	Comments
Viscosity	>= 500000 cP	>= 500000 cP	Part A, thixotropic
	>= 900000 cP	>= 900000 cP	Part B, thixotropic

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	>= 80	>= 80	
Tensile Strength at Break	>= 41.4 MPa	>= 6000 psi	
Shear Strength	>= 10.3 MPa	>= 1500 psi	Tensile lap, Al to Al

Thermal Properties	Metric	English	Comments
CTE, linear	40.0 - 45.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	22.2 - 25.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	
Thermal Conductivity	1.15 - 1.30 W/m-K	8.00 - 9.00 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	121 °C	250 °F	
Minimum Service Temperature, Air	-51.1 °C	-60.0 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.0 - 10 ohm-cm	5.0 - 10 ohm-cm	

Processing Properties	Metric	English	Comments
Cure Time	60.0 - 120 min	1.00 - 2.00 hour	
	@Temperature 93.3 °C	@Temperature 200 °F	
	1440 - 2880 min	24.0 - 48.0 hour	
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Pot Life	15 - 20 min	15 - 20 min	100 gram batch
Shelf Life	3.00 - 6.00 Month	3.00 - 6.00 Month	unopened containers

Descriptive Properties	Value	Comments
Mixing Ratio (A to B)	1:1	by weight or volume

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