

## **Master Bond EP76M-1R Nickel Conductive Epoxy Adhesive**

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

## **Material Notes:**

Description: Master Bond Polymer System EP76M-1R is a two component, nickel filled, electrically conductive adhesive for high performance bonding formulated to cure at room temperature or more rapidly at elevated temperatures. Unlike the majority of two part nickel conductive epoxy systems, the EP76M-1R has a one-to-one mix ratio, by weight or volume. It readily develops a high bonding strength of more than 1200 psi tensile shear and a T-peel of greater than 10 pli when measured and cured at 75°F. It is 100% reactive and does not contain any diluents or solvents. The volume resistivity of the cured system is 5-10 ohm-cm. Master Bond Polymer System EP76M-1R can be applied with minimal sagging or dripping even on vertical surfaces although it can be made thinner (flowable) by adding 5 to 10% of an appropriate solvent(xylene, acetone, MEK, etc.) by weight. The high strength bonds are remarkably adaptable to thermal cycling and resistant to chemicals including water, oil and most organic solvents, over the exceptionally wide temperature range of -100°F to +275°F. Adhesion to metals, glass, ceramics, vulcanized rubbers and many plastics is excellent. Parts A and B are both colored nickel. Master Bond EP76M-1R adhesive is widely used in the electronic, electrical, computer, semiconductor, microwave, appliance, and automotive industries, among others. For convenient handling, EP76M-1R is now available in premixed and frozen syringes. Product Advantages: Convenient mixing: 1 to 1 by weight or volume Contains no volatiles; excellent low outgassing properties 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 conductivity. High bond strength to similar and dissimilar substrates. Superior durability, thermal shock and chemical resistance. Outstanding toughness; much less rigid than conventional nickel epoxylnformation provided by MasterBond®

## Order this product through the following link:

 $http://www.lookpolymers.com/polymer\_Master-Bond-EP76M-1R-Nickel-Conductive-Epoxy-Adhesive.php \\$ 

Mechanical Properties	Metric	English	Comments
Shear Strength	>= 8.27 MPa	>= 1200 psi	Bond, After 30 days water immersion, Al to Al
	>= 8.62 MPa	>= 1250 psi	Bond, Al to Al
Peel Strength	>= 1.75 kN/m	>= 10.0 pli	T-peel

Thermal Properties	Metric	English	Comments
Thermal Conductivity	1.30 W/m-K	9.00 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	135 °C	275 °F	
Minimum Service Temperature, Air	-73.3 °C	-100 °F	

Processing Properties	Metric	English	Comments
Cure Time	180 - 240 min	3.00 - 4.00 hour	
Cure Time	@Temperature 65.6 °C	@Temperature 150 °F	



Processing Properties	2880 - 4320 min Metric	48.0 - 72.0 hour English	Comments
	@Temperature 23.9 °C	@Temperature 75.0 °F	
Pot Life	75 - 90 min	75 - 90 min	100 gram batch
Shelf Life	6.00 Month	6.00 Month	unopened containers

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

## **Contact Songhan Plastic Technology Co.,Ltd.**

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