

Silver Epoxy Electrical Conductor Technical Product Bulletin

PRODUCT DESCRIPTION:

AA-DUCT 906 represents the newest technology since the introduction of electrically conductive silver compounds. This unique formulation is based on a silver coated ceramic that results in lower material costs without adversely sacrificing the properties obtained with a pure silver formulation. This concept opens the door to a wide range of applications previously prohibited by the much higher cost of conventional silver conductive. AA-DUCT 906 cures at room temperature or can be accelerated with mild heat to form a tenacious bond between similar and dissimilar substrates such as aluminum, copper, magnesium, steel, bronze nickel, ceramic, glass, phenolic, and G-10 epoxy glass boards.

AA-DUCT 906, because of its excellent continuity, has been used extensively in such diversified applications as, microwave EMI and RFI shielding, in the assembly or repair of printed circuit boards, wave guides, electronic modules, flat cable, high frequency shields, connections, and circuitry and as a cold solder. This unique formulation offers ease in handling due to its creamy consistency and versatile application by hand, automatic dispenser, silk-screening, transfer or stamping techniques

PRODUCT PROPERTIES:

THOUSE THOSE ENTREES			
Appearance	Silver		
Cure Type	Heat cure or Room temperature		
	High strength		
Benefits	Perfect bond		
benefits	EMI & RFI shielding		
	Cold Solder		
	Excellent choice aluminum, copper, magnesium, steel,		
Substrates	bronze, nickel, kovar, ceramic, glass, phenolic and G-		
	10 epoxy glass boards.		
	microwave EMI and RFI shielding, in the assembly or		
Typical	repair of printed circuit boards, wave guides,		
Applications	electronic modules, flat cable, high frequency shields, connections, and circuitry and as a cold solder		
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UNCURED PROPERTIES:

Viscosity @ 25 °C cps	Paste	
Silver coated ceramic , %	50 to 75	
Pot Life @ RT	1 Hour	
Mix ratio, by weight	100:5 / Resin:Hardener	
Shelf life	1 Year	

CURE SCHEDULE:

15 minutes	@ 100°C
30 minutes	@ 60°C
24 hours	@ Room temperature

CURED PROPERTIES:

Volume Resistivity	< 0.0015
Hardness, Shore D	81
Compressive Strength, psi	13,600
Shrinkage Linear, in / in	0.004
Specific Gravity, 25°C / 25°C	2.60
Tensile Strength, psi	8,900
Compressive Strength, psi	13,700
Minimum Bond Line Thickness	1 mm

THERMAL PROPERTIES:

Thermal Conductivity, btu / hr / ft2 / °F / in	90
Thermal Expansion Coefficient,	1.9
(cm / cm / °C · 10-5)	
Heat Distortion, °C	165
Operating Temperature Range, °C	-50 to +165
Glass Transition Temperature	50 °C

GENERAL INFORMATION:

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

HOW TO USE:

- 1. Carefully clean and dry all surfaces to be bonded
- Apply AA-DUCT 906 completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds; however, maintain contact until adhesive is completely cured.
- Some separation of components is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.
- 4. Some ingredients in this formulation provided may crystallize when subjected to low temperature storage. A gentle warming cycle of 52°C for 30 minutes prior to mixing components may be necessary. Crystallized epoxy components do not react as well as liquid components and should be re-dissolved prior to use for best results.

AVAILABILITY:

This epoxy can be supplied in many different packages.

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