

Flexible Conductive Silver Epoxy Dual Cartridge System

Technical Product Bulletin

PRODUCT DESCRIPTION:

AA-DUCT 917 is a non-bleeding, electrically conductive, silver-filled epoxy formulation recommended for electronic bonding, coating, and sealing applications that require good flexibility coupled with good electrical and mechanical properties.

This two-part, thixotropic adhesive of refined pure silver and epoxy resin components is free of solvents and copper or carbon additives. It develops resilient, electrically and thermally conducting bonds and coatings between many different and dissimilar materials such as metals, ceramics, glass and plastic insulates.

AA-DUCT 917 cures at room temperature and can be used as a flexible "cold-solder" for heat-sensitive components where hot-soldering is impractical. It also can be used for the assembly and repair of electrical modules, flexible circuits, membrane switches, wave guides, flat cable and high frequency shields.

PRODUCT DESCRIPTION:

Appearance	Silver
Cure Type	Heat cure and Room temperature
Benefits	<ul style="list-style-type: none"> Free of solvents and copper or carbon additives Coatings between many different and dissimilar materials
Mix Ratio by weight	1:1 - Resin/Hardener
Substrates	<ul style="list-style-type: none"> Metal Ceramics Glass Plastic
Thixotropic Index	4.9
Typical Application	<ul style="list-style-type: none"> Assembly and repair of electrical modules, flexible circuits, membrane switches, wave guides, flat cable and high frequency shields Electronic bonding, coating, and sealing applications Can be used as a flexible "cold-solder"

UNCURED PROPERTIES:

Specific Gravity, mixed	2.32 g/cc
Pot Life	30 min
Solid Content	100 %
Volatile Organic Compounds (VOC) Content	24.41 g/
Viscosity	995000 cP @Temperature 25.0 °C

MISC PROPERTIES:

Shelf life	1 Year
Hardness, Shore D	80
Adhesive Bond Strength Lap shear, alum to alum	90.0 psi in 24 hrs @ 25°C 170 psi in 4 hrs @ 65°C

ELECTRICAL PROPERTIES:

Volume Resistivity	0.00011 ohm-c cured 4 hrs @ 65°C
	0.0016 ohm-cm cured 24 hrs @ 25°C

THERMAL PROPERTIES:

CTE, linear	19.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 °F
Thermal Conductivity	11.1 BTU-in/hr-ft ² -°F
Operating Temperature	-60.0 °C to 110 °C
Glass Transition Temp, T_g	4.00 °C, 39.2 °F

GENERAL INFORMATION:

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

HOW TO USE:

- Carefully clean and dry all surfaces to be bonded.
- Apply AA-DUCT 917 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.
- 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.

CURE SCHEDULE:

4.00 hours	At 65°C
24 hour	At 25°C

AVAILABILITY:

This epoxy can be supplied in many different packages.

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