

Pure silver filled electrically conductive epoxy
Maximum continuity of conductivity.

Technical Product Bulletin

PRODUCT DESCRIPTION:

AA-DUCT 918 is an epoxy adhesive and coating formulation based on pure silver. This versatile silver formulation offers the maximum continuity of conductivity with an electrical resistivity value of less than 1×10^{-4} ohm-cm.

AA-DUCT 918 is also characterized by a wide operating temperature range from -50 to $+170^{\circ}\text{C}$.

AA-DUCT 918 is recommended for electronic bonding and sealing applications that require both fine electrical and mechanical properties.

GENERAL PROPERTIES:

| | |
|-----------------------------|--|
| Appearance | Silver |
| Cure Type | Heat cure or Room Temperature |
| Benefits | <ul style="list-style-type: none"> • High strength • Perfect bond • Cold solder for heat sensitive components |
| Mix Ratio by weight | 1:1 / Resin: Hardener |
| Substrates | Excellent choice aluminum, copper, magnesium, steel, bronze, nickel, kovar, ceramic, glass, phenolic and G-10 epoxy glass boards. |
| Typical Applications | Electrical, conductive, RMI/EFI shielding, circuitry, printed circuit board and electronics repair |

UNCURED PROPERTIES:

| | |
|------------------------------------|--------|
| Viscosity @ 25 °C cps | Paste |
| Specific Gravity, mixed | 2.79 |
| Reactive solids contents, % | 100 |
| Pot Life | 1 Hour |
| Shelf life | 1 year |

CURE SCHEDULE:

| | |
|-------------------|------------------|
| 15 minutes | @ 100°C |
| 45 minutes | @ 50°C |
| 24 hours | Room temperature |

CURED PROPERTIES:

| | |
|---|--------------------------------|
| Hardness, Shore D | 85 |
| Shrinkage linear in/in | 0.0003 |
| Lap shear strength | 5 N/mm ² 700 psi |
| Volume Resistivity ohm. cm | 0.0001 |
| Thermal Expansion Coefficient, (cm / cm / °C · 10-5) | 1.5 |
| Thermal Conductivity, btu / hr / ft² / °F / in: | 100 |
| Tensile Strength, psi: | 9,500 |
| Compressive Strength, psi | 14,000 |
| Heat Distortion, °C | 170 |
| Operating Temperature °C | -50 to +170 |

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.
2. Apply AA-DUCT 918 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.
3. 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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