

## Silver Glass Sphere Epoxy Electrically Conductive

*Technical Product Bulletin*

### **PRODUCT DESCRIPTION:**

AA-DUCT GS1 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 GS1 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 GS1, 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:**

<b>Color</b>	Silver
<b>Cure Type</b>	Room temperature or Heat cure
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• High strength</li> <li>• Perfect bond</li> <li>• EMI &amp; RFI shielding</li> <li>• Cold Solder</li> </ul>
<b>Mix Ratio by weight</b>	100:5 (Resin : Hardener)
<b>Substrates</b>	Metal, Glass, aluminum, steel, bronze, nickel, ceramic and Etc.
<b>Operating Temperature</b>	-40 to (165°C) 329°F
<b>Typical Applications</b>	Electrical, conductive, circuitry, printed circuit board and electronics repair

### **UNCURED PROPERTIES:**

<b>Viscosity @ 25 °C cps</b>	Paste
<b>Specific Gravity, mixed</b>	2.60
<b>Reactive solids contents, %</b>	100
<b>Pot Life</b>	60 minutes
<b>Shelf life</b>	3 months in a plastic pouch 1 year in a jar kit

### **CURE SCHEDULE:**

<b>24 hours</b>	@ Room temperature 25°C (77°F)
<b>90 minutes</b>	@ 60°C (140°F)
<b>30 minutes</b>	@ 80°C (176°F)
<b>15 minutes</b>	@ 100°C (212°F)

### **CURED PROPERTIES:**

<b>Hardness, Shore D</b>	81
<b>Volume Resistivity ohm. cm</b>	<0.0015
<b>Compressive Strength, psi</b>	13,600
<b>Tensile Strength, psi</b>	8,900

### **THERMAL PROPERTIES:**

<b>Thermal Conductivity, w/mK</b>	0.8
<b>Operating Temperature Range:</b>	-40 to (165°C) 329°F

### **GENERAL INFORMATION:**

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

### **HOW TO USE:**

1. Carefully clean and dry all surfaces to be bonded.
2. Apply AA-DUCT GS1 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 must 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 125°F 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.

**Atom Adhesives**

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