



## ElectroBond™ Electrically Conductive Adhesive

ElectroBond electrically conductive adhesives are single component RTV (room temperature vulcanizing) adhesive systems designed for bonding conductive elastomer gaskets to metal flanges, or for providing EMI and environmental protection as a sealant. These materials form a cured skin within 30 minutes after exposure to atmospheric moisture without forming any corrosive byproducts. However, a full cure at room temperature is obtained after one week at 45% minimum relative humidity. Since the cure is caused by atmospheric moisture, ElectroBond is recommended in applications where the bond thickness is under 0.020 (0,5).

ElectroBond is a solvent-free adhesive/sealant and cures with little or no shrinkage. Bonds remain flexible and conductive, and can be used in environments where temperatures range from -70°F to 350°F (-57°C to 177°C) without degradation of physical or electrical properties. ElectroBond is a thixotropic paste that can be applied to vertical surfaces without any sagging.

ElectroBond is offered in a wide variety of fillers to provide maximum conductivity and compatibility with mounting surfaces.

ElectroBond has excellent adhering properties. However, metallic surfaces may require priming with ElectroBond 8800 Primer for optimum adhesion. ElectroBond 8800 Primer is supplied as part of the package.

Table 1.

Material Description			80	81	85	93	4 X A1
Number of Components			1	1	1	1	2
Polymer	Sil: Silicone		Sil	Sil	Sil	Sil	Epoxy
Filler	Ag: Silver, Cu: Copper, G: Glass		Ag/Cu	Ag/Al	Ag/G	Ni/C	Ag
	Al: Aluminum, Ni: Nickel						
	C: Carbon						
As Supplied							
Property	Units/Tol.	Test Method					
Appearance		Visual	Thixotropic Paste	Thixotropic Paste	Thixotropic Paste	Thixotropic Paste	Thixotropic Paste
Color		Visual	Tan	Tan	Tan	Dk. Gray	Beige
Specific Gravity		ASTM D792	3.20 ± 0.20	2.20 ± 0.20	2.10 ± 0.20	2.50 ± 0.20	2.40 ± 0.20
Cured Characteristics							
Durometer	Shore A, ± 5	ASTM D2240	70	65	65	70	100 (hard)
Peel Strength	PPI (KN/m), Min.	ASTM D1876	4.0 (0.7)	4.0 (0.7)	4.0 (0.7)	4.0 (0.7)	10 (1.8)
Lap Shear	PSI (MPA), Min.	ASTM D1002	150 (1.03)	175 (1.21)	125 (0.86)	130 (0.9)	1000 (6.9)
Volume Resistivity	Ohm-cm, (Max.)	Per MIL-DTL-83528C Para 4.5.10	0.01	0.04	0.05	0.10	0.0001
Service Temp.	°F (°C)		-67 to 347°F (-55 to 175°C)	-67 to 347°F (-55 to 175°C)	-67 to 347°F (-55 to 175°C)	-67 to 347°F (-55 to 175°C)	-60 to 300°F (-50 to 150°C)
Shelf Life	Months	From Date of Shipment in Original Container	6	6	6	6	6
Coverage	FT/#M/KG Diameter Bead	0.125 (3,175)	60 (40)	85 (58)	90 (60)	75 (51)	30 sq. in. (200 cm <sup>2</sup> ) max

All dimensions shown are in inches (millimeters) unless otherwise specified.



## ElectroPoxy™ Electrically Conductive Adhesive

ElectroPoxy (4XA1) electrically conductive adhesive is a dual-component system designed for bonding metal gaskets to flanges and maintaining their overall shielding effectiveness. It can also be used to repair printed circuit boards, restore the continuity of electrical circuits, attach electrical wires to delicate components and bond conductive textiles to metal. ElectroPoxy features include:

- Pure silver particle filler for high conductivity
- Effective over a wide temperature range from -60°F to 300°F (-50°C to 150°C).
- May be cleaned in uncured state with isopropyl alcohol

ElectroPoxy components are supplied in two 1-ounce (30 cc) jars. The contents of each are mixed in a 1:1 ratio to obtain a thick paste that can be applied where necessary. Curing may take place at room temperature or up to 212°F (100°C) to produce a very strong and highly conductive bond. Curing times are as follows:

Room Temperature — 24 to 36 hours  
 145°F (65°C) — 4 hours  
 212°F (100°C) — 15 minutes

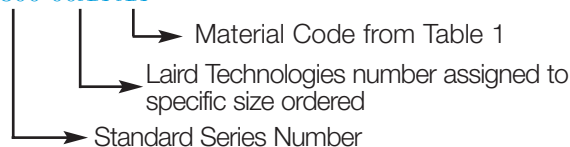
Please call Laird Technologies for further application and handling directions.

## Ordering Information

Material Type	Container Size	Part No.
ElectroBond	4 Ounce (118 cc) Cartridge	8800-0004-XX
ElectroBond	8 Ounce (237 cc) Cartridge	8800-0008-XX
ElectroBond	16 Ounce (473 cc) Cartridge	8800-0016-XX
ElectroPoxy	Two 1-Ounce (30 cc) Jars	8800-4XA1-77

Example (ElectroBond only)

8800-00XX-XX





## ElectroCaulk™ EMI Caulking Compound

ElectroCaulks are single component electrically conductive sealants for shielding of structures, cabinets, and conduits against electromagnetic interference (EMI). ElectroCaulks are based on silver-plated copper, silver-plated aluminum, silver-plated glass, and nickel-coated graphite filled silicone, or silver-coated aluminum and nickel-coated graphite filled polyisobutylene. ElectroCaulks are based on stable fillers and can be used within the recommended temperature range (see material specification) without any degradation in electrical or physical properties.

ElectroCaulks are thixotropic pastes with high tack and nonhardening properties and perform exceptionally well under vibratory conditions and against warping and displacement caused by temperature variation. ElectroCaulks adhere to most surfaces and can be applied to vertical or overhead surfaces without sagging or running.

ElectroCaulks are easy to apply with standard cartridge caulking guns and dispensing equipment, such as syringes or hand application with putty knife or spatula. ElectroCaulks have excellent adhering properties and can be used without any primer. However, metallic surfaces may require priming with ElectroBond 8800 Primer with silicone based sealants. Polyisobutylene based sealants are recommended for those applications which require painted surfaces or cannot use silicones. ElectroCaulks are available in 4, 8, and 16 ounce cartridges.

Table 1.

Material Description		41	42	43	44	45	46
Polymer	Sil: Silicone, PIB: Polyisobutylene	Sil	Sil	Sil	Sil	PIB	PIB
Filler	Ag: Silver, Al: Aluminum, G: Glass, Ni: Nickel, C: Graphite, Cu: Copper	Ag/Cu	Ag/Al	Ag/G	Ni/C	Ag/Al	Ni/C

### As Supplied

Property	Units	Test Method						
Appearance	Visual	Thix: Thixotropic	Thix	Thix	Thix	Thix	Thix	Thix
Color	Visual		Gray	Tan	Tan	Dk.Gr.	Tan	Dk.Gr.
Density	Gm/cc		2.10	2.00	1.90	1.80	1.90	1.80
Tack-Free Time	Hours		0.50	0.50	0.50	0.50	0.50	0.50
Shrinkage	%		25	20	20	25	20	25
Coverage	Feet		90	95	100	105	100	105
Shelf Life	Months		6	6	6	6	6	6
R.T. Cure	Hours		24	24	24	24	24	24

### Cured Characteristics

Volume Resis. As supplied	Ohm-cm (Max.)	L/T QA	0.01	0.01	0.05	0.10	0.01	0.01
Volume Resis. After 48 Hours @ (F/C)	Ohm-cm (Max.)	L/T QA	0.01/300/150	0.01/300/150	0.05/300/150	0.10/300/150	0.01/250/121	0.10/250/121
Shielding Effic.	dB, Min.	MIL-DTL-83528	100	90	90	70	90	70
Service Temperature	°F	L/T QA	-55/300	-55/300	-55/300	-55/300	-50/250	-50/250



## Application Directions

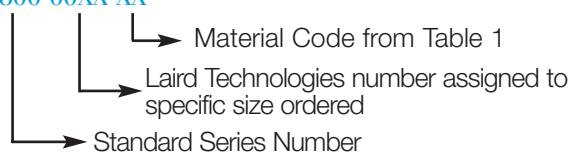
1. ElectroCaulks are thick pastes and the fillers have a tendency to settle. Roll the cartridges before use.
2. Clean the seams or joints of grease and/or foreign material with solvents such as toluene, xylene or MEK and allow to dry.
3. Trim nozzle to the desired bead size.
4. Place cartridge into a standard caulking gun.
5. Apply a uniform bead of ElectroCaulk to the mating surfaces prior to assembling or rivetting.

**Note:** Xylene, toluene or MEK are recommended solvents for cleaning or thinning.

## Ordering Information

Material Type	Container Size	Part No.
ElectroCaulk XX	4 Ounce (118 cc) Cartridge	8800-0004-XX
ElectroCaulk XX	8 Ounce (237 cc) Cartridge	8800-0008-XX
ElectroCaulk XX	16 Ounce (473 cc) Cartridge	8800-0016-XX

### 8800-00XX-XX



The properties and performance of ElectroCaulks may vary depending upon the specific application and, therefore, Laird Technologies can not guarantee that this product will meet the published specifications in each customer's individual application. The user should conduct his own test for the suitability of ElectroCaulks for a particular application.