



Silver Conductive Epoxy for the Assembly and Repair of Electronics

MG Chemicals offers silver conductive epoxy for the assembly and repair of electronics. It provides strong adhesion to many surfaces where soldering is not possible.

Features and Benefits

- Creates strong permanent electrical connections
- Excellent electrical and thermal conductivity
- Room temperature storage

Applications

- Repairing damaged circuits
- Creating jumpers, bridging, and gap filling
- Bonding heat sensitive components
- Bonding to conductive polymers
- Bonding to flexible circuits
- Bonding to gold, aluminum, brass, glass and bronze
- Die attachment in LEDs and semiconductors

1-Part—Unlimited Working Time

- 9410**
- Resistivity of $1.8 \times 10^{-3} \Omega \cdot \text{cm}$, heat cure only
 - T_g of 96°C

2-Part—20 Minutes Working Time

- 8331D**
- Resistivity of $1.8 \times 10^{-3} \Omega \cdot \text{cm}$
 - SVHC-free
- 8330D**
- Resistivity of $5.3 \times 10^{-4} \Omega \cdot \text{cm}$
 - NASA low outgassing approved
 - SVHC-free

2-Part—4 Hours Working Time

- 8331S**
- Resistivity of $6.0 \times 10^{-3} \Omega \cdot \text{cm}$, heat cure only
 - NASA low outgassing approved
 - SVHC-free
- 8330S**
- Resistivity of $7.0 \times 10^{-4} \Omega \cdot \text{cm}$, heat cure only
 - SVHC-free

Electrically Conductive Adhesives



UNCURED PROPERTIES

	8330D	8331D	8330S	8331S	9410
Number of components	2	2	2	2	1
Mixed density [g/mL]	3.22	2.40	3.06	2.42	2.34
Working time	20 min	20 min	4 h	4 h	Unlimited
Service cure @ 22 °C	65 min	65 min	—	—	—
Room temp. cure [h]	6	6	Heat cure	Heat cure	Heat cure
Heat cure [min @ °C]	10 @ 65 5 @ 80	10 @ 65 5 @ 80	120 @ 65 60 @ 80 30 @ 100	120 @ 65 60 @ 80 30 @ 100	60 @ 90 30 @ 100 7 @ 120

CURED PROPERTIES

Resistivity [$\Omega \cdot \text{cm}$]	5.3×10^{-4}	1.8×10^{-3}	7.0×10^{-4}	6.0×10^{-3}	1.8×10^{-3}
Service temperature range [°C]	-50 to 150	-50 to 150	-40 to 150	-40 to 150	-65 to 145
Glass transition temperature (T_g) [°C]	40	35	34	34	96
CTE prior T_g [ppm/°C]	63	58	97	78	42
CTE after T_g [ppm/°C]	363	234	208	158	150
Thermal conductivity @ 25 °C [W/(m·K)]	2.0	1.5	2.4	1.3	1.1
Thermal diffusivity @ 25 °C [mm²/s]	1.1	0.9	1.2	0.7	0.7
Specific heat capacity @ 25 °C [J/(g·K)]	0.6	0.7	0.6	0.8	0.8
Color	Silver grey	Silver grey	Silver grey	Silver grey	Silver grey
Hardness	84D	78D	73D	60D	70D
Tensile strength [N/mm²]	8.3	13	9.0	14	N/A
Compressive strength [N/mm²]	75	69	36	65	26
Lap shear (stainless steel) [N/mm²]	3.6	5.6	1.7	4.5	2.6
Lap shear (aluminum) [N/mm²]	2.6	5.1	1.2	7.1	2.8

Refer to TDS for more information.

AVAILABLE PACKAGING

Net content	6 mL (2 syringe kit)	6 mL (2 syringe kit)	6 mL (2 syringe kit)	6 mL (2 syringe kit)	3 mL (syringe)
	50 mL (2 jar kit)	50 mL (2 jar kit)	50 mL (2 jar kit)	50 mL (2 jar kit)	30 mL (cartridge)
					180 mL (cartridge)

