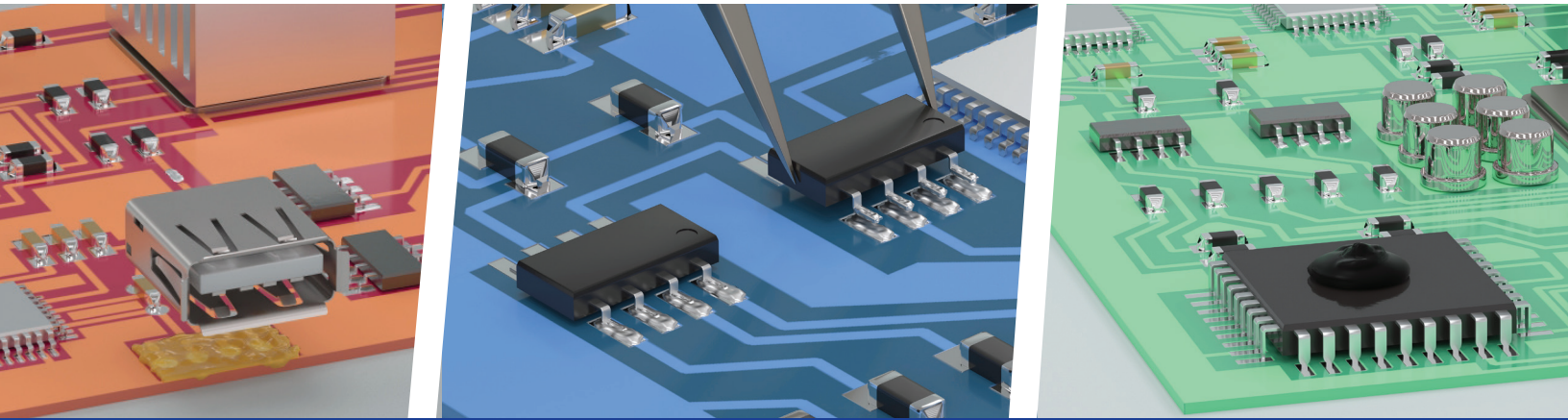


One-Part Epoxy Adhesives



Low cure temperature and up to 24 months room temperature storage

Features and Benefits:

- **Excellent adhesion to common electronics substrates and components**
- **No mixing required**
- **Unlimited working time**
- **Low cure temperature**
- **Extended shelf life at room temperature**

Applications:

Repairs, maintenance and manufacturing of:

- **Consumer Electronics**
- **Telecommunications equipment**
- **Medical devices**
- **Automotive components**

Two types of One-Part Epoxy Adhesives are available

General Purpose

Adhesives designed for use in electronic assembly operations, especially bonding SMD's to PCB's. They offer excellent adhesion to FR4, common PCB substrates and housings, glass, ceramics, metals, engineered thermoplastics, and thermoset laminates.

- **Available in Low Tg (Cat. no. 9300) and High Tg (Cat. no. 9310)**
- **Electrically insulating**
- **Shelf life up to 24 months at room temperature**

Electrically Conductive Adhesives

Formulated with pure silver powder combined with organic binders to produce electrically conductive paths over a variety of substrates. They are ideal for applications where simple handling, fast curing and reliability are needed. These products are specially designed for semi-conductor flip chip packaging, hybrid micro-electronic substrate attachment, and lid-sealing in electronics assembly operations. They work especially well as a die attachment for small chips, LED's and diodes.

- **Available in Low Tg (Cat. no. 9400)**
- **Extreme electrical conductivity**
- **Shelf life up to 12 months at room temperature (9400-30ML shelf life is up to 6 months and requires refrigeration)**

One-part Adhesive Comparison Chart

	9400	9310	9300
UNCURED PROPERTIES			
Working life	Unlimited	Unlimited	Unlimited
Viscosity	Thixotropic	86 500 cP [86.5 Pa·s]	1 200 000 cP [1 200 Pa·s]
Density	3.14 g/mL	1.15 g/mL	1.17 g/mL
Minimum full cure	2 h @70 °C [158 °F]	30 min @100 °C [212 °F]	1 h @70 °C [158 °F]
Optimal full cure	30 min @80 °C [176 °F]	10 min @120 °C [248 °F]	25 min @90 °C [194 °F]
CURED PROPERTIES			
Physical Properties			
Color	Silver grey	Amber	Amber
Hardness	74D	84D	80D
Mechanical Properties			
Tensile strength	2.9 N/mm ² [430 lb/in ²]	9.4 N/mm ² [1 360 lb/in ²]	4.7 N/mm ² [680 lb/in ²]
Compressive strength	18 N/mm ² [2 600 lb/in ²]	103 N/mm ² [15 000 lb/in ²]	91 N/mm ² [13 200 lb/in ²]
Lap shear strength (aluminum)	3.2 N/mm ² [460 lb/in ²]	6.2 N/mm ² [890 lb/in ²]	6.2 N/mm ² [900 lb/in ²]
Lap shear strength (stainless steel)	2.9 N/mm ² [430 lb/in ²]	8.5 N/mm ² [1 200 lb/in ²]	7.9 N/mm ² [1 100 lb/in ²]
Electrical Properties			
Volume resistivity	3.1 x 10 ⁻⁴ Ω·cm	9.3 x 10 ¹² Ω·cm	3.4 x 10 ¹² Ω·cm
Surface resistivity	0.018 Ω/sq	N/A	N/A
Breakdown voltage @3.175 mm [1/8"]	N/A	34 000 V [34 kV]	45 000 V [45 kV]
Dielectric strength @3.175 mm [1/8"]	N/A	270 V/mil [10 kV/mm]	357 V/mil [14 kV/mm]
Thermal Properties			
Glass transition temperature (T _g)	36 °C [97 °F]	113 °C [235 °F]	22 °C [72 °F]
CTE prior T _g	76 ppm/°C [169 ppm/°F]	56 ppm/°C [133 ppm/°F]	49 ppm/°C [120 ppm/°F]
CTE after T _g	100 ppm/°C [212 ppm/°F]	185 ppm/°C [365 ppm/°F]	197 ppm/°C [387 ppm/°F]
Thermal conductivity @25 °C	4.7 W/(m·K)	0.24 W/(m·K)	N/A
Thermal diffusivity @25 °C	2.2 mm ² /s	0.2 mm ² /s	N/A
Specific heat capacity @25 °C	0.7 J/(g·K)	1.4 J/(g·K)	N/A

Refer to TDS for more information.
N/A=Not Available

Available Packaging

