RESIN TECHNOLOGY GROUP, LLC

P R O D U C T   D A T A   S H E E T
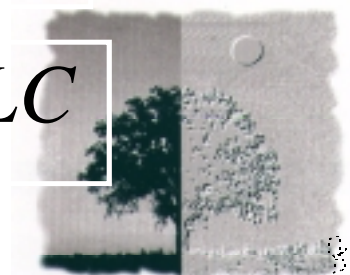
SILVER CONDUCTIVE
Silver-Filled Epoxy Adhesive

COMPOUND SILVER 402
Room Temperature Curing Silver Conductive Adhesive

Description:

COMPOUND SILVER 402 is an electrically conductive, silver filled epoxy adhesive recommended for bonding, and sealing electronic applications which require a combination of good mechanical and electrical properties. This two-part, smooth paste formulation of refined pure silver and epoxy is free of solvents and extraneous additives.   It develops strong, durable, electrically and thermally conductive bonds and coatings between many dissimilar materials including metals, ceramics and plastic laminates. COMPOUND SILVER 402 cures quickly at room temperature and can be used as a "cold solder" for heat sensitive components where hot soldering is impractical. It can also be used in the assembly and repair of electrical modules, printed circuits, wave guides, flat cable and high frequency shields. This adhesive complies with the requirements of NASA's Outgassing Specification.

Typical Physical Properties

Color:	Silver
Solids, %:	100
Specific Gravity:	2.5
Viscosity, cps @ 25°C, After Mixing:	Smooth Paste
Operating Temperature Range, °C:	-60 to 125
Hardness, Shore D:	85
Thermal Conductivity, BTU-in/Hr-Ft^2 °F:	42
Coefficient of Expansion, cm/cm °C:	49×10^{-6}

Handling Characteristics:

Mix Ratio, parts by weight, Resin to Hardener:	100 to 6.0
Pot Life, 20 Gram Mass @ 25°C:	75 Minutes
Cure Schedule @ 25°C:	18 Hours
Cure Schedule @ 65°C:	2 Hours
Cure Schedule @ 100°C:	30 Minutes
Cure Schedule @ 120°C:	15 Minutes

Typical Values After Various Cure Schedules:

Bond Line Cure Schedule	Volume Resistivity Ohm-Cm	Tensile Shear Al/Al, psi
15 Mins @ 120°C	0.0002	1710
30 Mins @ 100°C	0.004	1500
2 Hours @ 65°C	0.006	1000
24 Hours @ 25°C	0.030	700

Storage and Shelf Life

Shelf life is one year when stored at 77°F out of sunlight and in original, unopened containers of pints or greater. Shelf life will vary with specialty packaging.