CHEMTRONICS
Technical Data Sheet

TDS # CW2400

CircuitWorks® Conductive Epoxy

PRODUCT DESCRIPTION

CircuitWorks® Conductive Epoxy is a two part, silver epoxy used in prototype, repair and general conductive bonding applications. CW2400 features strong mechanical bonds, excellent electrical conductivity, and quick room temperature curing. CircuitWorks® Conductive Epoxy bonds aggressively to a wide variety of materials.

- Two-component product
- Simple mixing ratios
- Excellent electrical conductivity
- Fast curing
- High strength bond
- Bonds dissimilar surfaces
- Operating temperature range from
- -91°C (-131°F) to 100°C (212°F)

TYPICAL APPLICATIONS

CircuitWorks® Conductive Epoxy may be used for electronics applications including:

- Conductive Bonds Between Heat Sensitive Components
- Solderless Surface Mount Connections
- Circuit Board Trace Repair
- Static Discharge and Grounding
- Solder Repair
- Conductive Structural Adhesions

TYPICAL PRODUCT DATA AND PHYSICAL PROPERTIES

Composition

Material	Part A Part B	Epoxy Hardener
Specific Gravity (Parts A & B Mixed)		4.0

Cured Compound

Volume Resistivity	<0.001 ohm-cm
Thermal Conductivity	
Cal-cm/sec-cm^2 -°C	3.8 x 10^{-3}
BTU-in/hr-ft^2 -°F	11.0
W/m°K	1.6
Operating Temperature Range	-131 to 212°F (-91 to 100°C)
Lap Shear (ASTM D-1002)	>1200 lbs/in·
Shore Hardness	>70
Dropping Point (ASTM D-2266)	None @ 650°F (343°C)
Adhesion	Excellent
Cured Flexibility	Excellent
Chemical Resistance	Excellent
Moisture Resistance	Good
Typical Thickness	5 mil

Shelf life

9 months

Conditions: Store at temperatures below 77° F

COMPATIBILITY

CircuitWorks® Conductive Epoxy is generally compatible with most materials used in printed circuit board fabrication. As with any adhesive/sealant, compatibility with substrate should be determined on a non-critical area prior to use.

USAGE INSTRUCTIONS

Read MSDS carefully prior to use.

Cleaning: For best results, clean the board with one of Chemtronics® Electro-Wash® or Pow-R-Wash® cleaners in order to remove any surface contamination which may prevent adequate material contact.

Mixing: Mix equal amounts (1:1) by weight or volume of Part A and Part B. Mix thoroughly for 2 minutes and apply within 8 minutes.

Thinning: Do not attempt to thin.

Curing: Curing times and electrical conductivity depend primarily on temperature. For fastest curing times, maximum conductivity and adhesion, cure the bond between 150-250°F (65-121°C) for 5-10 minutes. CircuitWorks® Conductive Epoxy can be room temperature cured at or above 75°F (25°C), for 4 hours. Maximum conductivity and bond strength are achieved in 24 hours. *Curing at temperatures below 75°F* (25°C) *will result in a loss of conductivity and adhesion.*

Pot Life: 8-10 Minutes at 75°F (25°C) after mixing.

AVAILABILITY

CW2400	7g/ 0.25 oz. Adhesive & 7g/ 0.25 oz. Hardener
CW2400J	10g/ 0.35 oz. Adhesive & 10g/ 035 oz. Hardener

TECHNICAL & APPLICATION ASSISTANCE

Chemtronics provides a technical hotline to answer your technical and application related questions. The toll free number is: **1-800-TECH-401.**

NOTE:

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. CHEMTRONICS does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

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