

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 ² K	1.6
Operating Temperature Range	-131 to 212°F (-91 to 100°C)
Lap Shear (ASTM D-1002)	>1200 lbs/in ²
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
Shelflife	9 months
Conditions: Store at temperatures below 120° 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/ 0.35 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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