CircuitWorks®
Nickel Conductive Pen

Product# CW2000

Product Description

CircuitWorks Nickel Conductive Pen makes instant conductive traces on circuit boards. As an economical alternative to the CW2200 Silver Conductive Pen, this engineered nickel coating offers good electrical and thermal conductivity. The Nickel Conductive Pen is used in prototype, rework, and repair of circuit boards by linking components, repairing defective traces, and making smooth jumpers. The nickel traces dry in minutes and has excellent adhesion to most electronic materials. Engineers, repair technicians, and manufacturers will find that the CircuitWorks Nickel Conductive Pen speeds project completion and cuts rework time.

- Quickly creates conductive nickel traces on most surfaces
- Easy and economical to use
- Valved pen tip for easy applications
- Dries in minutes at room temperature
- Single component system
- Good electrical and thermal conductivity

Typical Applications

CircuitWorks Nickel Conductive Pen may be used for electronics applications including:

- Circuit Trace Repair
- Solderless Linking of Components
- EMI Shielding
- Quick Prototype Modifications

Compatibility

CircuitWorks Nickel Conductive Pen material has excellent compatibility with materials used in printed circuit board fabrication. As with any chemical system, compatibility with the substrate must be determined on a non-critical area prior to use.





Typical Product Data and Physical Properties

COMPOSITION:	
Material:	Nickel Filled Polymer
Color:	Dark Gray
Setting Rate:	< 2mm/hr.
PROPERTIES:	
Conductivity:	1.0 – 1.5 ohms/sq/mil
Tack-Free Time: @25ºC	15 to 20 minutes
Full Cure Time: @25ºC	24 hours
Electrical Conductivity:	Good
Adhesion:	Excellent
Flexibility:	Good
Chemical Resistance:	Good
Shelflife	12 months
RoHS Compliant	Yes

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Usage Instructions

For industrial use only. Read SDS carefully prior to use.

Cleaning: For best adhesion, clean board with Chemtronics Electro-Wash PX Cleaner Degreaser in order to remove any surface contamination which may prevent adequate material contact.

Mixing: Although this system has been formulated to resist hard-packing, it should be shaken vigorously for 30 seconds to insure the proper dispersion of the nickel flakes. If pen has been allowed to sit idle for a long period of time, the mixing ball may seize in the barrel. To free the mixing ball use force to tap the barrel end of the pen until the ball begins to move inside the pen.

Application: The conductive ink is dispensed through the CircuitWorks Nickel Conductive Pen. Squeezing the pen body while pressing down on the surface will allow the material to flow through the tip, enabling the trace to be drawn. Practice with the pen before attempting detail work.

Thinning: The conductive ink has been optimized for the CircuitWorks Nickel Conductive Pen and thinning is not normally necessary.

Clean-up/Removal: The conductive ink may be cleaned or removed using Chemtronics Electro-Wash PX.

Curing: Dries tack-free in 15 to 20 minutes at room temperature. Achieves electrical conductivity within 30 minutes. Full conductivity after 24 hours at room temperature. Heat cure for 10 - 15 minutes at 150 to 210°F (80 to 100°C) for maximum conductivity, durability and chemical resistance.

Availability

CW2000 9 g (0.32 oz), Standard Tip Pen

Environmental Impact Data

ODP	None
HCFC	None
VOC	Yes
HFC	None

Ozone depletion potential (ODP) is determined in accordance with the Montreal Protocol and U.S. Clean Air Act of 1990. Hydrochlorofluorocarbons (HCFCs) are regulated under the Montreal Protocol as Class II ozone depleting substances. Volatile Organic Compound (VOC) information is calculated on a weight basis using the VOC definition of California Air Resources Board (CARB) Consumer Product Regulations, South Coast Air Quality Management District (SCAQMD) Rule 102 and the Federal definition published in 40 CFR 51.100(s). Hydrofluorocarbons (HFCs) are not currently regulated.

Technical and 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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