SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

Company Address:
8125 Cobb Center Drive
Kennesaw, GA 30152

Product Information: 800-TECH-401 Emergency: (Chemtrec) 800-424-9300
Customer Service: 800-645-5244 Revision Date: February 10, 2007

Product Identification

CIRCUITWORKS® FLEX CONDUCTIVE PEN

Product Code: CW2900

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Product Ingredient Information	CAS No.	Wt. % Range
Silver (Metallic)	7440-22-4	45.0-65.0
Propylene Glycol Methyl Ether Acetate	108-65-6	10.0-30.0
Butyl Acetate	123-86-4	10.0-30.0
Modified Polyester Resin	mixture	5.0-25.0

SECTION 3: HAZARD IDENTIFICATION

Emergency Overview: Silver colored paint with an aromatic hydrocarbon odor. This product is flammable. Liquid and vapors will irritate eyes and skin. Breathing high concentration of product may produce headache, nausea, and drowsiness.
Potential Health Effects:
Eyes: Vapors of this product may irritate the eyes. Liquid is irritating and may cause tearing, redness, swelling or temporary corneal damage.
Skin: Contact may cause irritation. Prolonged contact may cause dermatitis.
Ingestion: Harmful if swallowed. May cause headache, drowsiness, and unconsciousness.
Inhalation: Harmful if inhaled. May cause irritation to the respiratory tract and to other mucous membranes.
Pre-Existing Medical Conditions Aggravated by Exposure: Lung, eye, skin.

SECTION 4: FIRST AID MEASURES

Eyes: Immediately flush with large amounts of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined by a Physician if discomfort persists.
Skin: Remove contaminated clothing and wash skin with soap and water. Get medical attention if irritation develops/persists. Wash clothes separately before reuse.
Ingestion: If swallowed, give two or more glasses of water immediately. DO NOT induce vomiting. Get medical attention.
Inhalation: In case of exposure to high concentrations of vapor or mist, remove to fresh air. If breathing is difficult, give oxygen and call a Physician. If breathing has stopped, apply artificial respiration and call a Physician.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: 76°F (24C) (TCC) LEL/UEL: 1.5/10.0 (% by volume in air)
Extinguishing Media: Use alcohol foam, water foam, carbon dioxide, dry chemical, or water spray. Water may not be effective in fighting the fire but can be used to cool overheated areas. Care must be taken to not spread the fire.
Fire Fighting Instructions: Remove all ignition sources. Use water spray to cool overheated containers. Take care not to spread the fire with the water. As in any fire, wear self-contained breathing apparatus (pressure-demand. OSHA/NIOSH approved or equivalent) and full protective gear. Solvent vapors are an explosion hazard. Keep material away from all sources of ignition, extreme heat, sparks or open flame. Material can be easily ignited and burns with intense heat.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Large Spills: Remove all sources of ignition (sparks, open flames, etc.). Wear self-contained breathing apparatus and appropriate personal protective equipment. Ventilate area, contain spill, and absorb spill with inert material. Collect spill by scooping up liquids and absorbent material and place in a sealed chemical waste container for proper disposal. Do not flush to sewer. Prevent material from entering storm sewers, ditches that lead to waterways and ground.
Small Spills: Absorb spill with absorbent material, then place in a chemical waste container for proper disposal.

SECTION 7: HANDLING AND STORAGE

Avoid prolonged exposure or repeated contact with skin, eyes, or clothing. Wash hands before eating. Use with adequate ventilation. Avoid breathing product vapor. Do not reuse this container. Store in a cool dry place, away form heat, sparks, or flames. Keep container tightly closed when not in use. Do not store in direct sunlight.
KEEP OUT OF REACH OF CHILDREN.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

CHEMICAL/NAME	ACGIH TLV	OSHA PEL	ACGIH STEL
Silver	0.1 mg/m^3 (dust)	0.01 mg/m^3 (dust)	NA
Propylene Glycol Methyl Ether Acetate	NA	NA	NA
Butyl Acetate	150 ppm	150 ppm	2000 ppm
Modified Polyester Resin	NA	NA	NA

Work/Hygienic Practices: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. .If vapor concentration exceeds TLV, use NIOSH approved organic vapor cartridge respirator. Wear safety glasses with side shields and rubber or other chemically resistant gloves when handling this material.

NFPA and HMIS Codes:	NFPA	HMIS
Health	2	2
Flammability	3	3
Reactivity	1	1
Personal Protection	-	B

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Silver colored paint
Odor: Aromatic Hydrocarbon
pH: NA
Vapor Pressure: 6 mm @ 20 °C
Vapor Density: >1
(Air = 1)
Solubility in Water: > 10%
Specific Gravity: 1.7-2.0
Evaporation Rate: >1
(Butyl acetate=1)
Boiling Range: 259-284 °F (127 – 140C)
Percent Volatile: 35-45%

SECTION 10: STABILITY AND REACTIVITY INFORMATION

Stability: This product is stable.
Conditions to Avoid: Avoid heat, sparks, open flame, and strong oxidizing conditions
Incompatibility: Do not mix strong oxidizing agents, strong acids, strong bases, mineral acids, organic acids, caustics and amines.
Products of Decomposition: Decomposition may release carbon monoxide, oxides of nitrogen, monomers and smoke. Depending on conditions, some highly reactive peroxides may be formed.
Hazardous Polymerization: Will not occur. Material is not known to polymerize.
Conditions to avoid: NA

SECTION 11: TOXICOLOGICAL INFORMATION

Ingredients	LD50 (rat) Oral	LD50 (rbt) Dermal	LC50 (rat) Inhalation
Silver	>10000 mg/kg (mouse)	NA	NA
Propylene Glycol Methyl Ether Acetate	8532 mg/kg	>5000 mg/kg	>4300 ppm
Butyl Acetate	10768 mg/kg	500 mg/24H MLD	2000 ppm/4H
Modified Polyester Resin	NA	NA	NA

Cancer Information: No ingredients listed as human carcinogens by NTP or IARC
Reproductive effects: none Teratogenic effects: none Mutagenic effects: none

SECTION 12: ECOLOGICAL INFORMATION

Environmental Impact Information

Avoid runoff into storm sewers and ditches which lead to waterways. Water runoff can cause environmental damage.

REPORTING

US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is: **1-800-424-8802**

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all federal, state and local regulations. Water runoff can cause environmental damage.

SECTION 14: TRANSPORTATION INFORMATION

	Proper Shipping Name	UN Number	Class	Sub. Risk	Pkg. Group	Hazard Label	Pkg. Instr.	Max. Quantity
Air:	Flammable liquids n.o.s. (Butyl Acetate)	UN1993	3	-	III	Flammable liquid	Y305 305	1L 5L
Ground:	Consumer Commodity ORM-D	-	ORM-D	-	-	ORM-D	173.150	5L

SECTION 15: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To- Know Act of 1986 (40 CFR 372).

Silver CAS# 7440-22-4 45.0-65.0%

This information should be included on all MSDSs copied and distributed for this material.

TOXIC SUBSTANCES CONTROL ACT (TSCA).

All ingredients of this product are listed on the TSCA Inventory.

WHMIS: Class B2: Class D2B

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16: OTHER INFORMATION

Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.