



MATERIAL SAFETY DATA SHEET  
CHEMTRONICS CW2200  
CIRCUITWORKS CONDUCTIVE PEN

**1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

<b>COMMERCIAL PRODUCT NAME:</b> CIRCUITWORKS CONDUCTIVE PEN	<b>CODE NO.</b> CW2200STP CW2200MTP CW2200BLK
<b>MANUFACTURER/SUPPLIER:</b>	<b>CHEMTRONICS, INC.</b> 8125 Cobb Center Drive Kennesaw, Georgia 30152 USA
<b>Phone Number:</b>	1-770-424-4888
<b>Fax Number:</b>	1-770-423-0748
<b>EMERGENCY:</b>	1-703-527-3887

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

HAZARDOUS INGREDIENTS	CAS No.	CLASSIFICATION	R PHRASES	CONCENTRATION
Silver	7440-22-4	-	-	35.0-65.0
Propylene Glycol Methyl Ether Acetate	108-65-6	Xi	R10, R36	2.0-20.0
Ethylene Glycol Monobutyl Ether Acetate	112-07-2	Xn	R20/21	2.0-20.0
Butyl Acetate	123-86-4	f	R10	5.0-35.0

**3. HAZARDS IDENTIFICATION**

<b>Main Hazards</b>	Flammable.
<b>Health Effects - Eyes</b>	Liquid may cause slight transient irritation.
<b>Health Effects - Skin</b>	Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis.
<b>Health Effects - Ingestion</b>	Swallowing may have the following effects: dizziness, light headedness, drowsiness, nausea.
<b>Health Effects - Inhalation</b>	Exposure to vapour at high concentrations may have the following effects: drowsiness, unconsciousness.

**4. FIRST-AID MEASURES**

<b>First Aid - Eyes</b>	Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.
<b>First Aid - Skin</b>	Wash skin with soap and water. Apply a reconditioning skin cream.
<b>First Aid - Ingestion</b>	Give two or more glasses of water. Do not induce vomiting. Obtain medical attention.
<b>First Aid - Inhalation</b>	Remove from exposure. Seek medical attention if you feel unwell.

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**5. FIRE-FIGHTING MEASURES**

<b>Extinguishing Media</b>	Use foam, dry chemical or carbon dioxide.
<b>Unsuitable Extinguishing Media:</b>	Do not use waterjet.
<b>Special Hazards of Product:</b>	This product may give rise to hazardous fumes in a fire.

<b>Protective Equipment for Fire-Fighting:</b>	Wear self contained breathing apparatus.
<b>6. ACCIDENTAL RELEASE MEASURES</b>	
<b>Personal Precautions:</b>	Ventilate the area. Wear appropriate protective clothing.
<b>Environmental Precautions:</b>	Try to prevent the material from entering drains or water courses.
<b>Spillages:</b>	Contain and absorb using earth, sand or other inert material.
<b>7. HANDLING AND STORAGE</b>	
<b>Handling:</b>	Use in well ventilated area.
<b>Storage:</b>	Storage area should be: out of direct sunlight, away from sparks and flames. Storage temperature should be kept below 50°C.
<b>8. EXPOSURE CONTROLS /PERSONAL PROTECTION</b>	
<b>Engineering Control Measures</b>	Exposure to this material may be controlled in a number of ways. The measures appropriate for a particular worksite depend on how the material is used and on the potential for exposure. Use of the basic principles of Industrial Hygiene will enable this material to be used safely.
<b>Respiratory Protection</b>	General ventilation should be sufficient.
<b>Hand Protection:</b>	Use a good quality barrier cream.
<b>Eye Protection:</b>	Chemical goggles if there is a risk of eye contact.
<b>Body Protection:</b>	Normal work wear.
<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>	
<b>Physical State:</b>	Paste
<b>Colour:</b>	Silver/gray
<b>Odour:</b>	mild hydrocarbon
<b>Boiling Range/Point (°C):</b>	126-192
<b>Explosion Limits (%): Lower/Upper</b>	1.5/10.0
<b>Solubility in water (kg/m3):</b>	Insoluble
<b>Vapour Pressure (mm.Hg./20°C)</b>	5-6
<b>Density (kg/m3)</b>	1.80

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<b>9. PHYSICAL AND CHEMICAL PROPERTIES continued</b>	
<b>Vapour Density (Air=1):</b>	>1
<b>Evaporation Rate:</b>	>1
<b>10. STABILITY AND REACTIVITY</b>	
<b>Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	Sources of ignition. Temperatures in excess of 50°C.
<b>Materials to avoid:</b>	Strong oxidizing agents, acids, bases, caustics.
<b>Hazardous Decomposition Products:</b>	Combustion will generate: oxides of carbon, oxides of nitrogen, monomers and smoke.
<b>11. TOXICOLOGICAL INFORMATION</b>	

**Acute Toxicity** Low order of acute toxicity.

**12. ECOLOGICAL INFORMATION**

**Mobility:** No product specific data is available.

**Persistence/Degradability:** No product specific data is available.

**Bio-accumulation:** No product specific data is available.

**13. DISPOSAL CONSIDERATIONS**

**Container Disposal:** Plastic caps and empty containers may be recycled via appropriate routes. Do not incinerate closed containers.

**14. TRANSPORTATION INFORMATION**

**UN Number:** 1263  
**UN Proper Shipping Name:** PAINT  
**UN Class** 3  
**UN Packaging Group** II  
**ADR/RID Substance Identification Number** 1263  
**ADR/RID - Description** Inflammable liquids having a flash-point below 21°C, not toxic and not corrosive.  
**ADR/RID - Class** 3  
**ADR/RID - Item No.** 3b  
**ADR/RID - Hazard Identification Number** 33  
**IMDG - Proper Shipping Name** PAINT  
**IMDG - Packaging Group** II  
**IMDG - Class** 3.2  
**IMDG - Marine Pollutant** No.  
**IMDG - Ems Number** 3-07  
**IMDG - Page Number** 3268  
**IATA - Proper Shipping Name** PAINT  
**IATA - Packaging Group** II  
**IATA - Class** 3  
**Tremcard No. TEC(R)** 527

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**15. REGULATORY INFORMATION**

**Labeling Information**

**f** Flammable.

**R Phrases:** Flammable.

**S Phrases:** Keep away from sources of ignition - No Smoking. Use only in well ventilated areas. Keep away from children. Do not breathe gas/vapour/spray. Avoid contact with eyes.

**16. OTHER INFORMATION:**

**PRODUCT INFORMATION: 1-770-424-4888**

**Product Use:** For industrial use only.

**MSDS first issued:** 5/31/96

**MSDS data revised:** 4/3/98

**EC Legislation**

EC Directive 91/155/EEC defining the laying down and detailed arrangements for the system of specific information relating to dangerous preparations.  
EC Directive 88/379/EEC relating to the classification, packaging and labelling of dangerous preparations.

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.