

Safety Data Sheet

245-1102

CircuitMedic, 22 Parkridge Road, Haverhill, MA 01835 USA

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Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Conductive Pen
Product Number:	245-1102
Recommended use:	Pen dispenser for creating conductive silver traces. Air dries in 5 to 10 minutes..
Supplier:	CircuitMedic 22 Parkridge Road, Haverhill, MA 01835 USA PHONE: 978-373-1600, FAX: 978-372-5700
Emergency Response:	For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 CCN4877 Outside USA and Canada: +1 703-527-3887 (collect calls accepted)



Section 2. HAZARD IDENTIFICATION

Hazard Identification:	This product is classified as a HAZARDOUS SUBSTANCE but NOT as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). WARNING! CAUSES EYE IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. Classification: Eye Irrit 2; Skin Irrit. 1B
Label Elements:	Hazard Statements (H): H220 – Causes eye irritation. H317 – May cause an allergic skin reaction. Precautionary Statements (P): P261 – Avoid breathing dust/mist/vapor/spray. P264 – Wash thoroughly after handling. P280 – Wear protective gloves. P302+P352 – IF ON SKIN: Wash with plenty of water. P333+P313 – If skin irritation or rash occurs get medical advice/attention. P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 – If eye irritation persists: Get medical advice/attention. P321 – Specific treatment see this container label. P362+P364 – Take off contaminated clothing and wash it before reuse. P501 – Dispose of contents/container to licensed treatment, storage and disposal facility (TSDF).
Other Warnings:	KEEP OUT OF REACH OF CHILDREN.

Section 3. COMPOSITION, INFORMATION OR INGREDIENTS

Chemical Name	CAS No.	RTECS No.	EINECS No.	%
SILVER	7440-22-4	VW350000	31-131-3	60-70
DIMETHY GLUTARATE	1119-40-0	N/A	214-277-2	15-40
DIMETHYL SUCCINATE	106-65-0	WM6765000	203-419-9	N/A
DIMETHYL ADIPATE	627-93-0	AV1645000	211-020-6	N/A
PROPRIETARY RESINS	N/A	N/A	N/A	N/A

EXPOSURE LIMITS IN AIR (mg/m3)

CHEMICAL NAME(S)	ACGIH ppm TLV	ACGIH ppm STEL	NOHSC ppm STEL ES-TWA	NOHSC ppm ppm STEL ES-STEL	NOHSC ppm ppm STEL ES-PEAK	OSHA ppm PEL	OSHA ppm STEL	OSHA ppm IDLH
SILVER	0.1	N/A	0.01	N/F	N/F	N/A	N/A	10
DIMETHY GLUTARATE	N/A	N/A	N/F	N/F	N/F	N/A	N/A	N/A
DIMETHYL SUCCINATE	N/A	N/A	N/F	N/F	N/F	N/A	N/A	N/A
DIMETHYL ADIPATE	N/A	N/A	N/F	N/F	N/F	N/A	N/A	N/A
PROPRIETARY RESINS	N/A	N/A	N/F	N/F	N/F	N/A	N/A	N/A

Section 4. FIRST AID MEASURES

First Aid.	
Ingestion:	If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk IMMEDIATELY. If the patient is vomiting, continue to offer water or milk. Never give water or milk to an unconscious person. Contact the nearest Poison Control Center or local emergency number. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed.
Eyes:	Splashes are not likely; however, if product gets in the eyes, flush with copious amounts of lukewarm water for at least 15 minutes lifting upper and lower lids, occasionally.
Skin:	Wash thoroughly with soap and water. In case of contact, immediately flush skin with plenty of water for at least 15 minutes.
Inhalation:	Remove victim to fresh air at once. If breathing difficult, administer oxygen. If breathing stops give artificial respiration. Keep person warm, quiet and get medical attention.
Effects of Exposure.	
Ingestion:	If product is swallowed, may cause nausea, vomiting and/or diarrhea.
Eyes:	Moderately irritating to the eyes. Symptoms of overexposure may include redness, itching, irritation and watering.
Skin:	May be irritating to skin. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some sensitive individuals.
Inhalation:	None expected.
Symptoms of Overexposure.	
Ingestion:	Nausea, intestinal discomfort, vomiting and/or diarrhea.
Eyes:	Overexposure in eyes may cause redness, itching and watering.
Skin:	Symptoms of skin overexposure may include redness, itching, and irritation of affected areas. Frostbite like symptoms. The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) in some individuals.
Acute Health Effects:	Non-irritating when used as directed. Moderate irritation to eyes and skin near affected areas. Additionally, high concentrations of vapors can cause drowsiness, dizziness, headaches and nausea.
Chronic Health Effects:	Non-irritating when used as directed. Overexposure may trigger asthma-like symptoms in some sensitive individuals. May also induce skin sensitization and respiratory hypersensitivity. Possible allergic dermatitis.
Target Organs:	Eyes, Skin.
Medical Conditions Aggravated by Exposure:	Pre-existing dermatitis, other skin conditions, and disorders of the target organs (eyes, skin, and respiratory system). Health: 1 Flammability: 1 Physical Hazards: 0 Protective Equipment: B

Section 5. FIRE-FIGHTING MEASURES

Fire & Explosion Hazards:	This product is not flammable. However, if involved in a fire, this product may decompose at high temperatures to form toxic gases (e.g., CO, COX).
Extinguishing Methods:	Water, Foam, CO2, Dry Chemical, Halon (if permitted). Use water spray to cool unopened containers.
Firefighting Procedures:	breathing apparatus (pressure-demand) and full protective gear. Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Fight fire upwind. Avoid spraying water directly into storage containers because of danger of boil-over. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

Section 6. ACCIDENTAL RELEASE MEASURES

Spills:	Equipment. Plastic or rubber gloves, respirator, eye protection, and apron may be required for clean-up of large spills. Small Spills: Wear appropriate protective equipment including gloves and protective eyewear. Use a non-combustible material such as vermiculite or sand to soak up the product and place it into a container for later disposal. Do not use water or a material such as "speedy dry" to soak up the material. Sweep up material using non-sparking materials (e.g., plastic brooms, shovels, dustpans) and place it into a plastic container or plastic liner within another container. Large Spills: Keep incompatible materials (e.g., organics such as oil) away from spills. Stay upwind and away from spill or release. Isolate immediate hazard areas and keep unauthorized personnel out of the area. Stop spill or release if it cal.
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Section 7. HANDLING AND STORAGE

Work & Hygiene Practices:	Do not eat, drink or smoke when handling this product. Contents under pressure. Handle as to avoid puncturing container(s). When used as intended, no additional protective equipment is necessary. Use chemical goggles if eye contact is possible. Wash unintentional residues with soap and warm water.
Storage & Handling:	Use and store in a cool, dry, well-ventilated location (e.g., local exhaust ventilation, fans) away from heat and direct sunlight. Avoid temperatures above 120 °F. Keep away from incompatible substances. Protect containers from physical damage. To avoid unintentional spraying keep cap in place when not in use.
Special Precautions:	No special respiratory protection is required under typical circumstances of use or handling. In instances where dusts of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.

Section 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Chemical Name	ACGIH TLV	ACGIH STEL	NOHSC ES-TWA	NOHSC ES-STEL	NOHSC ES-PEAK	OSHA PEL	OSHA STEL	OSHA IDLH
Silver	0.1	N/A	0.01	N/F	N/F	N/A	N/A	10

Ventilation & Engineering Controls:	General mechanical (e.g., fans) or natural ventilation is sufficient when this product is in use. Use local or general exhaust ventilation to effectively remove and prevent buildup of vapors or mist generated from the handling of this product. Ensure appropriate decontamination equipment is available (e.g., sink, safety shower, eye-wash station).
Respiratory Protection:	No special respiratory protection is required under typical circumstances of use or handling. In instances where dusts of this product are generated, and respiratory protection is needed, use only protection authorized by 29 CFR §1910.134, applicable U.S. State regulations, or the Canadian CAS Standard Z94.4-93 and applicable standards of Canadian Provinces, EC member States, or Australia.
Eye Protection:	Avoid eye contact. Wear splash proof goggles or equivalent eye protection (ANSI Z87). Safety glasses need to be used when handling or using this product.
Hand Protection:	Impermeable gloves required. May cause skin irritation in some sensitive individuals. When handling wear rubber, nitrile or impervious plastic gloves.
Body Protection:	No apron required when handling small quantities. When handling large quantities (e.g., ≥ 5 lbs), eye wash stations and deluge showers should be available. Upon completion of work activities.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Thick silver colored paste
Odor:	Sweet odor
Odor Threshold:	N/A
pH:	N/A
Melting Point/Freezing Point:	N/A
Initial Boiling Point/Boiling Range:	196-212 °C (388-413 °F)
Flashpoint:	100 °C (212 °F)
Upper/Lower Flammability Limits:	N/A
Vapor Pressure:	0.10 mm Hg @ 20 °C
Vapor Density:	N/A
Relative Density:	N/A
Solubility:	Negligible
Partition Coefficient (log Pow):	N/A
Autoignition Temperature:	N/A
Decomposition Temperature:	N/A
Viscosity:	N/A
Other Information:	NVC 60-70%

Section 10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions; unstable with heat or contamination.
Hazardous Decomposition Products:	Oxides of carbon (CO, CO ₂).
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Open flames, sparks, high heat, incompatible substances and direct sunlight.
Incompatible Substances:	Avoid extreme heat and ignition sources. Store away from oxidizers.

Section 11. TOXICOLOGICAL INFORMATION

Routes of Entry:	Inhalation: YES Absorption: YES Ingestion: YES
Toxicity Data:	This product has NOT been tested on animals to obtain toxicology data. Toxicology data, found in scientific literature, is available for some of the components of the product and is not presented in this document.
Acute Toxicity:	Moderate irritation to eyes and skin near affected areas.
Chronic Toxicity:	This material may aggravate any pre-existing skin condition (e.g., dermatitis).
Suspected Carcinogen:	N/A
Reproductive Toxicity:	This product is not reported to produce reproductive toxicity in humans.
Mutagenicity:	This product is not reported to produce mutagenic effects in humans.
Embryotoxicity:	This product is not reported to produce embryotoxic effects in humans.
Teratogenicity:	This product is not reported to cause teratogenic effects in humans.
Reproductive Toxicity:	This product is not reported to cause reproductive effects in humans.
Irritancy of Product:	The product can cause allergic skin reactions (e.g., rashes, welts, dermatitis) upon prolonged or repeated exposure.
Biological Exposure Indices:	NE
Physician Recommendations:	Treat symptomatically.

Section 12. ECOLOGICAL INFORMATION

Environmental Stability:	There is no specific data available for this product.
Effects on Plants & Animals:	There are no specific data available for this product.
Effects on Aquatic Life:	There are no specific data available for this product; however, very large releases of this product may be harmful or fatal to overexposed aquatic life.

Section 13. DISPOSAL CONSIDERATIONS

Waste Disposal:	Products covered by this MSDS, in their original form, when disposed as waste, are considered non hazardous waste according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations. Dispose of in accordance with federal, state and local regulations.
Special Considerations:	The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state, federal and provincial regulations.

Section 14. TRANSPORT INFORMATION

49 CFR (GND):	Not Regulated
IATA (AIR):	Not Regulated
IMDG (OCN):	Not Regulated
TDGR (Canadian GND):	Not Regulated
ADR/RID (EU):	Not Regulated
SCT (MEXICO):	Not Regulated
ADGR (AUS):	Not Regulated

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG, and the CTDGR.

Section 15. REGULATORY INFORMATION

SARA Reporting Requirements:	This product contains Silver a substance subject to SARA Title III, section 313 reporting requirements.
SARA Threshold Planning Quantity:	There are no specific Threshold Planning Quantities for the components of this product.
TSCA Inventory Status:	The components of this product are listed on the TSCA Inventory.
CERCLA Reportable Quantity (RQ):	Silver: 454 kg (1,000 lbs.)
Other Federal Requirements:	This product complies with the appropriate sections of the Food and Drug Administration's 21 CFR Subchapter G, (Cosmetics).
Other Canadian Regulations:	This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the Priorities Substances List.
State Regulatory Information:	Silver is found on the following state criteria list: Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA). No other ingredients in this product, present in a concentration of 1.0% or greater, are listed on any of the following states criteria lists: California Proposition 65 (CA65), Delaware Air Quality Management List (DE), Florida Toxic Substances List (FL), Massachusetts Hazardous Substances List (MA), Michigan Critical Substances List (MI), Minnesota Hazardous Substances List (MN), New Jersey Right-to-Know List (NJ), New York Hazardous Substances List (NY), Pennsylvania Right-to-Know List (PA), Washington Permissible Exposures List (WA), Wisconsin Hazardous Substances List (WI).
Other Requirements:	This product does not contain any chemicals known to the State of California to cause cancer or other reproductive harm. For more information go to www.P65Warnings.ca.gov .

Section 16. OTHER INFORMATION

Other Information:	WARNING! CAUSES EYE IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. Use only as directed. Avoid contact with skin. Avoid contact with eyes. Wear suitable protective clothing/gloves. Avoid breathing dust/mist/vapor/spray. Wash thoroughly after handling. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. For specific treatment see this container label. Take off contaminated clothing and wash it before reuse. KEEP LOCKED UP AND OUT OF REACH OF CHILDREN.
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