Section 1: Product and Company Identification
Product Name: Pelco® Colloidal Silver
Synonym: Pelco® Conductive Liquid Silver, Pelco® Colloidal Silver Paint
Company Name
Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477
Domestic Phone (800) 237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
International Phone (01) (530) 243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
Chemetrec Emergency Number 1-800-424-9300 24 hrs a day.

Section 2: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)</th>
<th>%</th>
<th>OSHA PEL mg/m³</th>
<th>ACGIH TWA mg/m³</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver (7440-22-4)*</td>
<td>~60</td>
<td>0.01</td>
<td>ND</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Arcosolve PM (107-98-2) **</td>
<td>100 PPM</td>
<td>ND</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Toluene (108-88-3) **</td>
<td>200 PPM</td>
<td>20 PPM</td>
<td>No</td>
<td>3</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Ethanol (64-17-5) **</td>
<td>1000 PPM</td>
<td>ND</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Ethyl Acetate (141-78-6) **</td>
<td>400 PPM</td>
<td>ND</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

*NIOSH IDLH: 10 mg/m³ (as Ag) 0.1 mg/m³
** Proprietary

Section 3: Hazard Identification
Emergency overview
Appearance: Gray liquid or paste
Immediate effects: Flammable material. Caution! May cause skin irritation.

Potential health effects
Primary Routes of entry: Inhalation, ingestion, skin, and eye contact.
Signs and Symptoms of Overexposure: ND
Eyes: May cause eye irritation.
Skin: May cause skin irritation.
Ingestion: NIF
Inhalation: NIF
Chronic Exposure: NIF
Chemical Listed As Carcinogen Or Potential Carcinogen: No
See Toxicological Information (Section11)

**Potential environmental effects**
See Ecological Information (Section 12)

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**Section 4: First Aid Measures**

**If accidental overexposure is suspected**

Eye(s) Contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

Skin Contact: Wash area thoroughly with soap and water. Get medical aid if irritation develops or persist.

Inhalation: Remove from exposure to fresh air immediately. Get medical aid if cough or other symptoms appear.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. If victim is conscious and alert, give 2-4 cups full of milk or water. Get medical aid.

**Note to physician**

Treatment: ND

Medical Conditions generally Aggravated by Exposure: ND

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**Section 5: Fire Fighting Measures**

Flash Point: ND on solvent mixture. Ethyl Acetate: 24 °F (-4.4 °C)

Flammable Limits: ND

Auto-ignition point: ND

Fire Extinguishing Media: Carbon dioxide, foam, dry chemical, water

Special Fire Fighting Procedures: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

Unusual Fire and Explosion Hazards: Can burn in fire, releasing toxic vapors. Vaporized easily at normal temperatures.

Hazardous combustion products: Forms carbon dioxide and carbon monoxide.

DOT Class: Flammable

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**Section 6: Accidental Release Measures**

Steps to be Taken in Case Material is Released or Spilled: Wear protective equipment. For an uncontrolled release of this product to the environment, take immediate steps to stop and contain release. Notify local authorities, if required. Clean up with rags or paper and place in container for refining.

Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

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**Section 7: Handling and Storage**

Precautions to be Taken in Handling and Storage: Used with adequate ventilation. Avoid contact with skin and eyes. Wash thoroughly after handling. Keep container closed when not in use.
Storage temperature: Store at ambient or lower temperature.
Storage Pressure: NA

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Section 8: Exposure Controls / Personal Protection

**Engineering Controls**
Ventilation required: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Personal Protection Equipment**
Respiratory protection: Good general ventilation should be sufficient to control airborne levels. A NIOSH approved dust/mist respirator is recommended when TLV levels are exceeded.
Protective gloves: Use appropriate chemical gloves when handling.
Skin protection: Use appropriate protective clothing, gloves and shoes.
Eye protection: Wear chemical safety glasses with side shields or face shield
Additional clothing and/or equipment: Eye wash facilities available where eye contact can occur.

**Exposure Guidelines**
See Composition/Information on Ingredients (Section2)

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Section 9 Physical and Chemical Properties

Appearance and Physical State: Grey paste liquid.
Odor (threshold): Strong odor
Specific Gravity (H2O=1): ND
Vapor Pressure (mm Hg): ND
Vapor Density (air=1): ND
Percent Volatile by volume: ND
Evaporation Rate (butyl acetate=1): ND
Boiling Point: 167º F
Freezing point / melting point: ND
pH: NA
Solubility in Water: ND
Molecular Weight: NA

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Section 10: Stability and Reactivity
Stability: Stable under normal conditions of use. Keep cap tight.
Conditions to Avoid. Incompatible materials
Materials to Avoid (Incompatibility): Strong oxidizers, acids and alkali.
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide
Hazardous Polymerization: Will not occur.

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Section 11: Toxicological Information
Results of component toxicity test performed: ND
Human experience: ND
This product does not contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.
Section 12: Ecological Information
Ecological Information: Ecological data are not available. Material should be treated as harmful to aquatic organisms.
Chemical Fate Information: ND

Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification: Can be recycled to recover precious metal.
Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information
US DOT Information: Proper shipping name: Flammable liquid, n.o.s. (1-Methoxy-2-Propanol, Toluene)
Hazard Class: 3
Packaging group: III
UN Number: UN1993
IATA: Proper shipping name: Flammable liquid, n.o.s. (1-Methoxy-2-Propanol, Toluene)
Hazard Class: 3
Packaging group: III
UN Number: UN1993
IMO: Proper shipping name: Flammable liquid, n.o.s. (1-Methoxy-2-Propanol, Toluene)
Class: 3
UN Number: UN1993
Packaging group: III
Marine Pollutant: No
Canadian TDG: Flammable liquid, n.o.s. (1-Methoxy-2-Propanol, Toluene)

Section 15: Regulatory Information
United States Federal Regulations
SARA: Section 302: No. Section 311: No.
SARA Title III: Following ingredients of this product are listed in SARA 313: Toluene: CAS# 108-88-3, 10% Maximum. Ethyl Acetate: CAS# 141-78-6, 4% Maximum. Silver: CAS# 7440-22-4, 60% Maximum.
RCRA: ND
TSCA: All components of this product are listed on the TSCA Inventory.
CERCLA: Toluene: RQ = 1000 lbs (45.4 Kg), Silver: RQ = 1000 lbs (45.4 Kg), Ethyl Acetate: RQ = 5000 lbs (2270 Kg)

State Regulations
California Proposition 65: Contains Toluene and Ethanol. These chemicals are known to the State of California to cause birth defects or other reproductive harm.

International Regulations
Canada WHMIS: ND
Europe EINECS Numbers: ND
Section 16: Other Information
Label Information: Flammable. Caution may cause skin irritation.
European Risk and Safety Phrases: ND
European symbols needed: ND
Canadian WHMIS Symbols: ND
Hazard Rating HMIS®: Health: 1; Fire: 3; Physical hazard: 0
NFPA Ratings: Health: 1; Fire: 3; Instability: 0
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Abbreviations used in this document
NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data

Disclaimer
Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.

MSDS Form 0013F1 V2