

**Material Safety Data Sheet****Product No. 83110-5 to 83130-100 Pelco® BioPure™ Gold Colloids, 5 to 100 nm Size Nanoparticles****Issue Date (07-07-10)****Review Date (09-11-17)****Section 1: Product and Company Identification****Product Name: Pelco® BioPure™ Gold Colloids, 5 to 100 nm Size Nanoparticles**

Synonym: gold, nano-scale gold, gold nanoparticles, colloidal gold

**Company Name****Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477**

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

**CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day****CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day****Section 2: Composition / Information on Ingredients**

<b>Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)</b>	<b>% By Mass</b>	<b>OSHA PEL mg/m3</b>	<b>ACGIH TLV mg/m3</b>	<b>NTP</b>	<b>IARC</b>	<b>OSHA regulated</b>
Colloidal Gold (16903-35-8)*	0.1%	NE	NE	No	No	No
Tannic Acid (1401-55-4)	Trace	NE	NE	No	3	No
Water (7732-18-5)	< 100	ND	ND	No	No	No

\*Chloroauric acid or Tetrachloroauric(III) acid as Gold Colloid.

**Section 3: Hazard Identification****Emergency overview**

Appearance: Red liquid, varies with individual particles 5-100 nm total diameter.

Immediate effects: Specific information for the mixture is not available.

**Potential health effects**

Primary Routes of entry: Ingestion, dermal contact.

Signs and Symptoms of Overexposure: ND

Eyes: May cause slight to mild irritation of the eyes. Prolonged exposure may cause eye damage.

Skin: May cause slight to mild irritation to the skin.

Ingestion: May be harmful if ingested.

Inhalation: Under normal usage not applicable. Mists or aerosol forms may be harmful or irritating.

Acute Health Effects: May be irritating to skin and eyes.

Chronic Exposure: Unknown.

Chemical Listed As Carcinogen Or Potential Carcinogen: None.

See Toxicological Information (Section 11)

**Potential environmental effects**

See Ecological Information (Section 12)

**Section 4: First Aid Measures****If accidental overexposure is suspected**

Eye(s) Contact: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Get medical attention if irritation persists.

Skin Contact: Wash the affected area with soap and water. Remove contaminated clothes if necessary.

Inhalation: Under normal usage not applicable. Remove to fresh air. Seek medical attention immediately.

Ingestion: Seek medical attention immediately. If the person is conscious, rinse their mouth out with water.

#### **Note to physician**

Treatment: ND

Medical Conditions generally Aggravated by Exposure: Potential sensitivity from previously exposed individuals.

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#### **Section 5: Fire Fighting Measures**

Flash Point: Non-flammable.

Flammable Limits: NA

Auto-ignition point: NA

Fire Extinguishing Media: None. Material is non-flammable.

Special Fire Fighting Procedures: No special fire fighting procedures required for this material.

Unusual Fire and Explosion Hazards: None.

Hazardous combustion products: None.

DOT Class: Not regulated.

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#### **Section 6: Accidental Release Measures**

Steps to be Taken in Case Material is Released or Spilled: Small spills can be mixed with vermiculite or sodium carbonate and swept up or diluted or flushed with water to dilute according to local, state, and federal disposal guidelines. Solid surface should be wiped with a surfactant to clean any remaining materials.

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: Avoid contact with skin, eyes and clothing. Avoid prolonged or repeat exposure.

Storage temperature: Closed container stored at 4°C away from light. DO NOT FREEZE.

Storage Pressure: NA

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#### **Section 8: Exposure Controls / Personal Protection**

##### **Engineering Controls**

Ventilation required: None under normal conditions of use.

##### **Personal Protection Equipment**

Respiratory protection: None under normal conditions of use.

Protective gloves: Wear protective gloves.

Skin protection: Wear protective clothing and gloves.

Eye protection: Always wear approved safety glasses when handling a chemical substance in the laboratory.

Additional clothing and/or equipment: None.

##### **Exposure Guidelines**

See Composition/Information on Ingredients (Section2)

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#### **Section 9 Physical and Chemical Properties**

Appearance and Physical State: Red liquid varies with individual particles 5-100 nm total diameter.

Odor (threshold): None

Specific Gravity (H<sub>2</sub>O=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: ND

Freezing point / melting point: ND

pH: ND

Solubility in Water: Insoluble

Molecular Weight: 196.97 (gold)

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### **Section 10: Stability and Reactivity**

Stability: Stable under normal conditions of use and storage.

Conditions to Avoid: None under proper usage.

Materials to Avoid (Incompatibility): None under proper usage.

Hazardous Decomposition Products: None under proper usage.

Hazardous Polymerization: No hazardous polymerization.

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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.

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### **Section 12: Ecological Information**

Ecological Information: ND

Chemical Fate Information: ND

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### **Section 13 Disposal Considerations**

RCRA 40 CFR 261 Classification: None.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

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### **Section 14: Transportation Information**

US DOT Information: Proper shipping name: Not regulated.

IATA: Proper shipping name: Not regulated.

IMO: Proper shipping name: Not regulated.

Marine Pollutant: No

Canadian TDG: Not regulated.

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### **Section 15: Regulatory Information**

#### **United States Federal Regulations**

MSDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA: Section 313: Bulk gold listed. This product is not subject to SARA section 313 reporting requirements.

SARA Title III: None

RCRA: ND

TSCA: Listed in the TSCA inventory for gold.

CERCLA: ND

#### **State Regulations**

California Proposition 65: None

#### **International Regulations**

Canada WHMIS: ND

Europe EINECS Numbers: ND

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### **Section 16: Other Information**

Label Information: ND

European Risk and Safety Phrases: ND

European symbols needed: ND

Canadian WHMIS Symbols: ND

Hazard Rating: Health: **ND**; Fire: **0**; Reactivity: **ND**  
(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

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**Disclaimer**

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