Section 1: Product and Company Identification
Product Name: Pelco® NanoXact™ 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: Hazard Identification
2.1 Classification of the substance or mixture: This product is not subject to GHS classification as a hazardous substance.

2.2 Label elements
Hazard Pictograms: NA
Signal Word: NA
Hazard Statements: NA
Precautionary Statements: NA

2.3 Other hazards

Health Effects:
NFPA Hazard Rating: Health: 0; Fire: 0; Reactivity: 0
HMIS® Hazard Rating: Health: 0; Fire: 0; Reactivity: 0
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment:
PBT: ND
vPvB: ND

Emergency overview:
Appearance: Opaque dark red/brown or red/gold liquid.
Immediate effects: May be irritating to skin, eyes and digestive tract.

Potential health effects
Primary Routes of entry: Skin, ingestion
Signs and Symptoms of exposure: Exposure to gold compounds can cause contact dermatitis. The toxicological properties have not been thoroughly investigated. The data supplied are for closely related compounds. No data available.
Eyes: May cause eye irritation; prolonged exposure may cause eye damage.
Skin: May be harmful if absorbed through skin; may cause skin irritation.
Ingestion: May be harmful if ingested.
Inhalation: May be harmful if inhaled; may cause respiratory tract irritation.
Chronic Exposure: ND
Chemical Listed as Carcinogen or Potential Carcinogen: No
See Toxicological Information (Section 11)

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

### Section 3: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Principle Component(s)</th>
<th>%</th>
<th>OSHA PEL mg/m³</th>
<th>ACGIH TLV mg/m³</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA regulated Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold (as colloid)</td>
<td>0.005</td>
<td>ND</td>
<td>ND</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(7440-57-5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tannic acid (1401-55-4)</td>
<td>trace</td>
<td>ND</td>
<td>ND</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>&gt;99</td>
<td>NA</td>
<td>NA</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Section 4: First Aid Measures

**If accidental overexposure is suspected**

**Eye(s) Contact:** Remove contacts if present. Immediately flush the eyes with water for at least 10-15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** Wash the affected area with soap and water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**Inhalation:** If breathed in, move person to fresh air. If not breathing, give artificial respiration.

**Ingestion:** If the person is conscious, rinse their mouth out with water. Never give anything by mouth to an unconscious person.

**Note to physician**
Treatment: ND
Medical Conditions generally Aggravated by Exposure: ND

### Section 5: Fire Fighting Measures

**Flash Point:** ND
**Flammable Limits:** ND
**Auto-ignition point:** ND
**Fire Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus for fire-fighting if necessary.
**Unusual Fire and Explosion Hazards:** None
**Hazardous combustion products:** None
**DOT Class:** Not regulated.

### Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Avoid breathing vapors, mist or gas. Small spills can be mixed with vermiculite or sodium carbonate and swept up or diluted/flushed with water to dilute according to local, state and federal guidelines. Solid surface should be wiped with a detergent-based cleaner to clean any remaining materials.

**Waste Disposal Methods:** Dispose of waste according to Federal, State and Local Regulations.
Section 7: Handling and Storage
Precautions to be taken in Handling and Storage: Avoid contact with skin, eyes and clothing. Avoid repeated or prolonged exposure. Store in closed container away from light. Storage class (TRGS 510): Non-combustible liquids.
Storage temperature: 4-25ºC (39-77ºF). Do not freeze.
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection
Engineering Controls
Ventilation required: None

Personal Protection Equipment
Respiratory protection: Not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges.
Protective gloves: Wear protective gloves.
Skin protection: Wear protective clothing.
Eye protection: Safety glasses.
Additional clothing and/or equipment: None required

Exposure Guidelines
See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties
Appearance and Physical State: Dark red/brown or red/gold, opaque liquid with suspended gold particles 5-150 nm in diameter.
Odor (threshold): ND
Specific Gravity (H2O=1): 1.0001 g/cm³ @ 25ºC
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: Particles are insoluble
Molecular Weight (of gold): 196.97

Section 10: Stability and Reactivity
Stability: Stable
Conditions to Avoid: Freezing
Materials to Avoid (Incompatibility): ND
Hazardous Decomposition Products: May be formed under fire conditions; nature of decomposition products unknown.
Hazardous Polymerization: ND

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: ND
Chemical Fate Information: ND
Section 13: Disposal Considerations
RCRA 40 CFR 261 Classification: ND
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: Not regulated
IATA: Not regulated
IMO: Not regulated
Marine Pollutant: No
Canadian TDG: Not regulated

Section 15: Regulatory Information
United States Federal Regulations
OSHA Hazards: No known OSHA hazards
SARA 302 Components: No chemicals in this material are subject the reporting requirements of SARA Section 302.
SARA 313 Components: No chemicals in this material are subject to the reporting requirements of SARA Section 313.
SARA 311/312 Hazards: No SARA Hazards..
RCRA: ND
TSCA: Gold, as colloid (7440-57-5), Tannic acid (1401-55-4) are listed.
CERCLA: None listed

State Regulations
California Proposition 65: This product does not contain any chemicals known to the State of CA to cause cancer, birth defects, or any other reproductive harm.

MA Right to know components: No components are subject to the MA Right to Know Act.
PA Right to know components:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>% by Mass</th>
<th>Hazardous</th>
</tr>
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<td>7440-57-5</td>
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<td>No</td>
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<td>Tannic Acid</td>
<td>1401-55-4</td>
<td>trace</td>
<td>No</td>
</tr>
<tr>
<td>Water</td>
<td>231-791-2</td>
<td>&gt;99</td>
<td>No</td>
</tr>
</tbody>
</table>

NJ Right to now components:

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International Regulations
DSL STATUS: All components of this product are on the Canadian DSL list
Canada WHMIS: ND
Europe EINECS Numbers: ND

Section 16: Other Information
Label Information: See section 2
European Risk and Safety Phrases: ND
European symbols needed: ND
Canadian WHMIS Symbols: ND

Abbreviations used in this document
**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.

SDS Form 0013F1V4