Section 1: Product and Company Identification
Product Name: Colloidal Gold
Synonym: Burnish gold, C.I. 77480, C.I. Pigment metal 3, Colloidal gold, Gold flake, Gold powder, Magnesium gold purple, Shell gold. The synonyms supplied are for a closely related compound. Non biological in nature.
Manufacture: BB International Ltd

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)
Chemtrec 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 TLV mg/m3</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colloidal gold (7440-57-5)</td>
<td>0.001-0.01</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 3: Hazard Identification
Emergency overview
Appearance: Liquid, colorless, pale yellow, red or purple.
Immediate effects: Avoid contact and inhalation.

Potential health effects
Primary Routes of entry: NIF
Signs and Symptoms of Overexposure: Exposure to gold compounds can cause contact dermatitis. The toxicological properties have not been thoroughly investigated. The data supplied are for a closely related compound.
Eyes: May cause irritation.
Skin: May be harmful by skin absorption.
Ingestion: May be harmful by ingestion
Inhalation: May be harmful by inhalation.
Chronic Exposure: ND
Chemical Listed As Carcinogen Or Potential Carcinogen: No
Section 4: First Aid Measures
If accidental overexposure is suspected
Eye(s) Contact: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers.
Skin Contact: In case of skin contact, flush with copious amounts of water for at least 15 minutes.
Inhalation: If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
Ingestion: If swallowed, wash out mouth with water provided that person is conscious. Call a physician.
Note to physician
Treatment: ND
Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures
Flash Point: NA
Flammable Limits: NA
Auto-ignition point: NA
Fire Extinguishing Media: Water spray. Carbon dioxide, dry chemical powder or appropriate foam.
Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes
Unusual Fire and Explosion Hazards: Emits toxic fumes under fire conditions.
Hazardous combustion products: ND
DOT Class: None

Section 6: Accidental Release Measures
Steps to be Taken in Case Material is Released or Spilled: Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Absorb on sand or vermiculite and place in closed containers for disposal. Ventilated area and wash spill site after material pickup is complete.
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: See section 8
Storage temperature: Do not freeze.
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection
Engineering Controls
Ventilation required: Mechanical exhaust.
Personal Protection Equipment
Respiratory protection: Wear appropriate NIOSH/MSHA approved respirator.
Protective gloves: Chemical resistant gloves.
Skin protection: Wear protective clothing.
Eye protection: Wear safety goggles or face shield
Additional clothing and/or equipment: ND

**Exposure Guidelines**
See Composition/Information on Ingredients (Section 2)

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### Section 9 Physical and Chemical Properties

Appearance and Physical State: Liquid, colorless, pale yellow, red or purple
Odor (threshold): None
Specific Gravity (H_2O=1): ND
Vapor Pressure (mm Hg): ND
Vapor Density (air=1): ND
Percent Volatile by volume: ND
Evaporation Rate (butyl acetate=1): As water.
Boiling Point: As water.
Freezing point / melting point: As water
pH: 5 to 10
Solubility in Water: Aqueous solution
Molecular Weight: NA

### Section 10: Stability and Reactivity

Stability: Stable
Conditions to Avoid: Freezing
Materials to Avoid (Incompatibility): Contact with salt will cause precipitation of colloid.
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide.
Hazardous Polymerization: Will not occur

### Section 11: Toxicological Information

Results of component toxicity test performed: RTECS data supplied are for a closely related compound. RTECS number: MD5070000, Gold
Target Organ Data:
Lungs, thorax or respiration (acute pulmonary oedema)
Lungs, thorax or respiration (Dyspnea)
Tumorigenic (equivocal tumorigenic agent by RTECS criteria)
Tumorigenic (tumors at site of application)
Only selected registry of toxic effects of chemical substances is presented here. See actual entry in RTECS for complete information.
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
Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification: NIF. Contact a licensed waste disposal service to dispose of this material. Licensed Waste Disposal: Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
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: Not regulated
Hazard Class: None
Packaging group: None
UN Number: None
Limitations: None
IATA: Proper shipping name: Not regulated
Hazard Class: None
Packaging group: None
UN Number: None
Limitations: None
Domestic shipments only: NA
IMO: Proper shipping name: Not regulated
Class: None
UN Number: None
Packaging group: None
EMS: ND
MFAG: ND
Marine Pollutant: No
Canadian TDG: ND
IMDG Page: ND
Limitations: ND

Section 15: Regulatory Information
United States Federal Regulations
SARA Title III: None
RCRA: None
TSCA: EPA TSCA section 8 (B) Chemical Inventory
EPA TSCA section 8 (D) Unpublished health / safety studies
EPA TSCA test submission (TSCATS) data base, September 1997.
CERCLA: No RQ
State Regulations
California Proposition 65: None
International Regulations
Canada WHMIS: ND
Europe EINECS Numbers: EC NO: 231-165-9
TLV and source
RTECS data and synonyms supplied are for a closely related compound.
Reviews, standards and regulations
OEL = MAK
NOHS 1974: HZD T0367; NIS 2; TNF 80; NOS 2; TNE 174
NOHS 1974: HZD 35455; NIS 18; TNF 1230; NOS 25; TNE 9464
NOES 1983: HZD X2971; NIS 1; TNF 3; NOS1; TNE 6
NOES 1983: HZD X7506; NIS 4; TNF 225; NOS 10; TNE 2626; TFE 108
NOES 1983: HZD 35455; NIS 27; TNF 2595; NOS39; TNE 30128; TFE 5425

Section 16: Other Information
Label Information: Avoid contact and inhalation.
European Risk and Safety Phrases: NIF
European symbols needed: NIF
Canadian WHMIS Symbols: NIF
HMIS® Hazard Rating: Health: 1; Fire: 0; Physical Hazard: 0; Personal Protection: See Section 8
(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