

Safety Data Sheet

Product No. 15701-1 through 15714-20 Colloidal Gold, 2, 5, 10, 15, 20, 30, 40, 50, 60, 80, 100, 150, 200, and 250nm Issue Date (07-01-14) Review Date (08-31-17)

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

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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 substance or mixture

This product has no classification under CLP. Not classified as a hazardous substance.

GHS Pictograms: NA GHS Categories: NA

2.2 Label elements

Void 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: 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 See Toxicological Information (Section11) **Potential environmental effects**

See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m3	ACGIH TLV mg/m3	NTP Carcinogen	IARC Carcinogen	OSHA regulated Carcinogen
Colloidal gold (7440-57-5) EC-No. 231-165-9	0.001- 0.01%	NE	NE	No	No	No

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact:	Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by
	separating eyelids with fingers. Call a physician.
Skin Contact:	Flush with copious amounts of water for at least 15 minutes. Remove contaminated
	clothing and shoes. Call a physician.
Inhalation:	If swallowed, wash out mouth with water provided the person is conscious. Call a
	physician.
Ingestion:	Remove to fresh air. If breathing becomes difficult, 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. Ventilate area and wash spill site after 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: Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes. Must be kept in original packaging. Storage temperature: Store between $2 - 8^{\circ}$ C. **Do not freeze.** Storage Pressure: NA **For laboratory use only.**

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, including fully-buttoned lab coat.Eye protection:Wear safety goggles or face shield.Additional clothing and/or equipment: NDExposure GuidelinesExe Composition /Information on Incondicate (Caption 2)

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Liquid; colorless/pale yellow or red/purple. Odor (threshold): None (ND) 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): 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 salts will cause precipitation of colloid. Also halogens, hydrogen peroxide, ammonia.
Hazardous Decomposition Products: ND
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 Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: NA

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 Packing group: None UN Number: None Limitations: None Domestic shipments only: NA IMO: Proper shipping name: Not regulated Class: None UN Number: None Packing group: None Marine Pollutant: No Canadian TDG: ND

Section 15: Regulatory Information United States Federal Regulations

SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200. SARA: None 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 **Abbreviations used in this document** NE= Not established NA= Not applicable NIF= No Information Found ND= No Data

Disclaimer

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SDS Form 0013F1V4