



Material Safety Data Sheet

Product No. 21-10, 21-100, 21-2, 21-50, 8071, 91110, 91520, 91521, 9550, 9552, 9562,

Gold Products

Issue Date (04-27-10)

Review Date (05-03-12)

Section 1: Product and Company Identification

Product Name: Gold Products

Synonym: Gold metal; burnish gold; colloidal gold; gold flake; gold leaf; gold powder; magnesium gold purple; shell gold.

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

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m ³	ACGIH TLV mg/m ³	NTP	IARC	OSHA regulated
Gold (7440-57-5)	0.0-100	NE	NE	No	No	No

Section 3: Hazard Identification

Emergency overview

Appearance: Yellow, solid, pieces, powder, wire or flat disc.

Immediate effects: Poison by intravenous route. Questionable carcinogen.

Potential health effects

HEALTH HAZARDS (ACUTE AND CHRONIC): Gold poisoning is rare. The few recorded cases of fatalities are the result of therapeutic overdose. Human systemic effects are similar to those of arsenic exposure and include: violent diarrhea, gastritis, colitis, dermatitis, blood dyscrasias, leukopenia, aganulocytosis and a plastic anemia. The therapeutic use of gold compounds has been associated with serious effects at the kidney, liver, and other vital organs. Generally, gold compounds are poorly absorbed when ingested. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Primary Routes of entry: None

Signs and Symptoms of Overexposure: ND

Eyes: May cause eye irritation.

Skin: May cause skin irritation

Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.

Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.

Chronic Exposure: ND

Chemical Listed As Carcinogen Or Potential Carcinogen: None

See Toxicological Information (Section11)

Potential environmental effects

See Ecological Information (Section 12)

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact: Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

Skin Contact: Remove contaminated clothing; brush material off skin; wash affected area with mild soap and water; seek medical attention if symptoms persist.

Inhalation: Remove victim to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention if symptoms persist.

Ingestion: Give 1-2 glasses of milk or water and induce vomiting; seek medical attention if symptoms persist. Never induce vomiting or 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: NA

Flammable Limits: NA

Auto-ignition point: NA

Fire Extinguishing Media: Not applicable. Use suitable extinguishing media for surrounding materials and type of fire.

Special Fire Fighting Procedures: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.

Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Extremely inactive; not attacked by acids, air or oxygen. Superficially attacked by aqueous halogen at room temperature. React with aqua regia, with mixtures containing chlorides, bromides, or iodides if they can generate nascent halogens. Reacts with many oxidizing mixtures especially those containing halogens. Reacts with alkali cyanides, solutions of thiocyanates and double cyanides. Does not corrode in air but is tarnished by sulfur. Finely divided gold with hydrogen peroxide may explode.

Unusual Fire and Explosion Hazards: Finely divided gold with hydrogen peroxide may explode.

Hazardous combustion products: NA

DOT Class: None

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Wear appropriate respiratory and protective equipment specified in section VIII-control measures. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA)

air filter and place in a closed container for proper disposal or recycle. Take care not to raise dust.

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: None with solid metal. Store for conditions is required.

Storage temperature: Room temperature.

Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required: Good general ventilation should be sufficient to control airborne levels.

Personal Protection Equipment

Respiratory protection: NIOSH approved respirator for dust conditions

Protective gloves: Rubber gloves

Skin protection: Rubber gloves and protective gear suitable to prevent contamination.

Eye protection: Safety glasses

Additional clothing and/or equipment: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Exposure Guidelines

See Composition/Information on Ingredients (Section2)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Yellow metallic, solid, powder, wire or flat disc

Odor (threshold): None

Specific Gravity (H₂O=1): 19.3

Vapor Pressure (mm Hg): ND

Vapor Density (air=1): ND

Percent Volatile by volume: NA

Evaporation Rate (butyl acetate=1): NA

Boiling Point: 2700.00 °C

Freezing point / melting point: 1064.40 °C

pH: NA

Solubility in Water: Insoluble

Molecular Weight: 196.967 g/mole

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Incompatible materials

Materials to Avoid (Incompatibility): Not attacked by many acids, air or oxygen; attacked by aqueous halogens at room temperature. Incompatible with sulfuric acid, ammonia, aqua regia, with mixtures containing chlorides, bromides, or iodides if they can generate nascent halogens, with many oxidizing mixtures especially those containing halogens, alkali cyanides, solutions of thiocyanates, and double cyanides., acetylene, CS₂, Ethanol + Nitric acid, Bromoazide, Ethyleneimine, oxalic acid, permonosulfuric acid, tartaric acid, NH₄NO₃, inorganic and organic peroxides, metal chlorates, bromates, and iodates, SE, TE, S, MnCl₂, azides, hydroxylamine, CrO₃, K_nO₃.

Hazardous Decomposition Products: Fumes of gold, nascent halogens

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Results of component toxicity test performed: Implant-Rat: TDLo 200 mg/Kg, Equivocal tumorigenic agent. Implant-Mouse: TDLo 21 g/Kg, Equivocal tumorigenic agent.

Implant-Rat: TD 4730 mg/Kg, Equivocal tumorigenic agent. Intravenous-Rat: TDLo 58 mg/Kg. Ipr-Rat: TDLo: 250 mg/Kg. Scu-Rat TDLo: 250 mg/Kg.

Human experience: Powders may cause localized skin irritation or irritate the respiratory tract by mechanical action.

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. Recycle.

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

IATA: Proper shipping name: Not regulated

IMO: Proper shipping name: Not regulated

Marine Pollutant: No

Canadian TDG: Not regulated

Section 15: Regulatory Information

United States Federal Regulations

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

SARA: None

SARA Title III: None

RCRA: ND

TSCA: Listed 8(b) gold powder

CERCLA: None listed

State Regulations

California Proposition 65: None

International Regulations

Canada WHMIS: Not regulated

Europe EINECS Numbers: ND

Section 16: Other Information

Label Information: ND

European Risk and Safety Phrases: ND

European symbols needed: ND

Canadian WHMIS Symbols:

Estimated Hazard Rating: Health: **0**; Fire: **0**; Reactivity: **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.

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