TED PELLA, INC.
Microscopy Products for Science and Industry

Safety Data Sheet

Product No. 26-10, 26-2, 26-50, 29-46, 91119, 91219, 91581, 9572 Palladium Products, Evaporation Materials, Preformed Shapes, Targets, Wire
Issue Date (04-21-15)
Review Date (08-24-17)

Section 1: Product and Company Identification

Palladium Products, Evaporation Materials, Preformed Shapes, Targets, Wire
Synonym: None
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

The substance is not classified as hazardous to health or the environment according to CLP regulation
Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not Applicable
Information concerning particular hazards for human and environment: Not Applicable; No information know.

GHS Pictograms: NA
GHS Categories: NA

2.2 Label elements

Hazard Pictograms: NA
Signal Word: NA
Hazard Statements: NA
Precautionary Statements: NA

2.3 Other hazards

Palladium powder is flammable.

Health Effects:
HMIS® Hazard Rating: Palladium Metal Powder, Health: 2; Flammability: 3; Physical: 3; Chronic Health: *
HMIS® Hazard Rating: Palladium Metal, Health: 1; Flammability: 0; Physical: 0
NFPA Hazard Rating: Palladium Metal Powder, Health: 2; Fire: 3; Reactivity: 3;
NFPA Hazard Rating: Palladium Metal, Health: 1; Fire: 0; Reactivity: 0
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment:
PBT: NA
vPvB: NA

Emergency overview

Appearance: Bright to Silver gray, lustrous malleable and ductile solid material. Disc, sheets, wire, pellets and powder.
Immediate effects: Palladium Metal: Low toxicity. The alloys in solid form are generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulates could be generated. Palladium Powder: Flammable solid.
Ingestion and inhalation may have irritating effects.

Potential health effects

Primary Routes of entry: Inhalation, ingestion and skin and eye contact of dust, powders
Signs and Symptoms of Overexposure: ND
Eyes: Exposure to dust of pure metallic finely-divided form may cause irritation to the eyes.
Skin: Exposure to dust of pure metallic finely-divided form may cause skin irritation.
Ingestion: Ingestion may have irritating effects. May be harmful.
Inhalation: Inhalation of dust or finely-divided form may have irritating effects.
Chronic Exposure: ND
Chemical Listed As Carcinogen Or Potential Carcinogen: None.
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
Palladium (7440-05-3) EC-No. 231-115-6	≤100	NE*	NE*	No	No	No

*Palladium powder

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact: Flush eyes with lukewarm water for 15 minutes. If irritation persists, contact physician.
Skin Contact: Wash thoroughly with soap and water. If irritation persists, contact physician.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Contact physician.
Ingestion: Procedures normally not required. If large quantities are ingested, contact physician.

Note to physician

Treatment: ND
Medical Conditions generally Aggravated by Exposure: Individuals who may have had allergic reactions to metals or sensitivity, may encounter skin rash or dermatitis, if skin contact with this product occurs. Persons with impaired pulmonary functions may incur further impairment if dust or fumes are inhaled.

Section 5: Fire Fighting Measures

Flash Point: Non-flammable as a solid. Palladium metal powder: NA
Flammable Limits: NA
Auto-ignition point: NA
Fire Extinguishing Media: Special powder for metal fires. Do not use water.

Special Fire Fighting Procedures: Self-contained breathing apparatus should be worn when fighting metal dust fires. High levels of dust or fine particles in the air may ignite or explode.
Unusual Fire and Explosion Hazards: Dust, powder and fumes are flammable or explosive when exposed to heat, to flame or by chemical reaction with oxidizing agents.
Hazardous combustion products: If this product is involved in a fire, metal oxide fumes can be released.
DOT Class (Palladium metal powder): Flammable solid.

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Do not allow the material to be released to the environment without government permits. Do not allow material to reach sewage system or any water course. Do not allow to penetrate the ground/soil.
Methods for containment and clean-up: Pick up mechanically.
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: Store in a cool, dry place in a tightly-sealed container. Store away from acids and oxidizing agents. Do not create dust.
Storage temperature: NA
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required	Use mechanical local exhaust ventilation adequate to maintain airborne concentrations of all components and their decomposition products to within their respective OSHA PELS.

Personal Protection Equipment

Respiratory protection	Not normally required. Use an appropriate NIOSH approved respirator if airborne dust concentration exceed the OSHA, PEL or ACGIH , TLV.
Protective gloves	Protective gloves
Skin protection	Protective clothing
Eye protection	Safety glasses

Additional clothing and/or equipment: Eyewash station.

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Silver-grey solid in various forms
Odor (threshold): None (NA)
Specific Gravity (H_2O=1): 12.02 g/cm^3
Vapor Pressure (mm Hg): NA
Vapor Density (air=1): NA
Percent Volatile by volume: NA

Evaporation Rate (butyl acetate=1): NA
Boiling Point: 3167 ºC
Melting point: 1555 ºC
pH: NA
Solubility in Water: Insoluble
Molecular Weight: ND

Section 10: Stability and Reactivity
Stability: Stable.
Conditions to Avoid: Avoid conditions which create dust or fumes.
Materials to Avoid (Incompatibility): Oxidizing agents, strong acids, halogens and bases.
Palladium undergoes a violent reaction with arsenic, methanol, ethanol, and alcohols.
Hazardous Decomposition Products: Metal oxide fumes.
Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information
Results of component toxicity test performed: There is no information on the toxicity of this metal. Under normal use of the solid form of this material there are few health hazards. Welding, cutting grinding or any process creating dust, fume or oxide may cause hazardous levels of certain elements.
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: Recycle palladium products.
Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

Solid Palladium forms as pellets, sheets, targets wire are not regulated.

Palladium metal powder is regulated.

US DOT Information: Proper shipping name: Metal, Powder, Flammable, n.o.s. (Palladium Powder)
Hazard Class: 4.1
Packaging group: III
UN Number: UN3089
IATA: Proper shipping name: Metal, Powder, Flammable, n.o.s. (Palladium Powder)
Hazard Class: 4.1
Packing group: III
UN Number: UN3089
IMO: Proper shipping name: Metal, Powder, Flammable, n.o.s. (Palladium Powder)
Hazard Class: 4.1
UN Number: UN3089
Packing group: III
Marine Pollutant: No
Canadian TDG: Proper shipping name: Metal, Powder, Flammable, n.o.s. (Palladium Powder)

Section 15: Regulatory Information
United States Federal Regulations
SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.
SARA (Section 302): No
SARA Title III (Section 311/312) Powders: Fire Hazard, Acute Health Hazard.

SARA Title III (Section 313): None
RCRA: No
TSCA: Palladium metal powder is listed TSCA inventory 8(b).
CERCLA: None listed.

State Regulations

California Proposition 65: No

International Regulations

Canada WHMIS: Palladium powder: CLASS B-4: Flammable solid.
Europe EINECS Numbers: 231-115-6

Section 16: Other Information

Label Information: ND
European Risk and Safety Phrases: ND
European symbols needed: ND
Canadian WHMIS Symbols: ND

Abbreviations used in this document

NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data

Disclaimer

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