



Chemtrec: (800) 424-9300
Poison Center: (800) 562-8236
Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Palladium

Formula: Pd

SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 106.40

CAS #	OSHA PEL	ACGIH TLV	%
7440-05-03	NE	NE	0.0-100.0%

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 3167°C

Melting Point: 1555°C

Evaporation Rate: N/A

Solubility in water: Insoluble

Vapor Pressure (vs. air or mmHg): N/A

Specific Gravity (Water=1): 12.02 g/cc at 20.0°C

Flash Point: N/A

Appearance and odor: Gray-black powder and silver-white, metallic pieces, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown

Explosive Limits: LEL: N/A

UEL: N/A

Extinguishing Media: Use suitable extinguishing agent for surrounding material 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.



Unusual Fire and Explosion Hazards:

- May have an explosive reaction with ydrogen + hydrogen peroxide.
- May have a reaction with formic acid or sodium tetrahydroborate, releasing flammable and explosive hydrogen gas.
- May have a violent reaction with isopropyl alcohol and OF2S.
- Under the proper conditions it undergoes hazardous reactions with aluminum; arsenic; carbon; methanol; ozonides and sulfur.

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (instability): None

Incompatibility (Materials to avoid): Hydrogen, flammable gases and organic liquids

Hazardous Decomposition or Byproducts: Hydrogen gas

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other? No

To the best of our knowledge the chemical, physical and toxicological properties of palladium metal have not been thoroughly investigated and recorded.

Palladium metal: May be a skin sensitizer. In the laboratory, palladium appears to bind to many cell components; blocks the action of a number of enzymes and interferes with use of energy by nerves and muscles; induces lung malfunction and produces abnormal fetuses. Lethal intravenous doses cause appetite loss, hemolysis, renal deposition and bone marrow damage. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause a red, dry, throat and coughing.

Ingestion: No acute or chronic health effects recorded.

Skin: May cause redness and itching.

Eye: May cause redness, itching, and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: Inhaltion of dust or powder may cause abbrasive irritation to the respiratory system.

Chronic: May induce lung malfunction and produce abnormal fetuses.

Ingestion:

Acute: Poorly absorbed by the body when ingested.

Chronic: No chronic health effects recorded.



Skin:

Acute: May cause abrasive irritation and possibly may be a skin sensitizer.

Chronic: No chronic health effects recorded.

Eye:

Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

Target Organs: No target organs recorded

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Medical Conditions Aggravated by Exposure: Pre-existing respiratory disorder

Emergency and First Aid Procedures:

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

Ingestion: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person

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

Eye: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation and extinguish sources of ignition. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: To maintain concentration at or below the PEL, TLV

Mechanical (Gen): Recommended

Work/Hygienic/Maintenance Practices:



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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.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established
