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SAFETY DATA SHEET

Section 1- IDENTIFICATION

COMPOSITION Pd		PRODUCT NAME Palladium
SUPPLIER: Plasmaterials, Inc. 2268 Research Drive Livermore, CA 94550 Ph: 925-447-4030	RECOMMENDED USE: Laboratory Chemicals Scientific Research	EMERGENCY TELEPHONE NUMBERS US: 800-424-9300 International: 001-703-527-3887

Section 2- HAZARD(S) IDENTIFICATION

Classification: This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
HEALTH HAZARDS: Skin Sensitization: Category 1 (H317)
LABEL ELEMENTS: Signal Word: Warning

<p style="text-align: center;"><u>HAZARD STATEMENTS</u></p> <p>-H317: May cause an allergic skin reaction.</p> <p style="text-align: center;"><u>PRECAUTIONARY STATEMENTS</u></p> <p>-P261: Avoid breathing dust, fume, gas, mist, vapors, spray -P272: Contaminated work clothing should not be allowed out of the workplace. -P280: Wear protective gloves/protective clothing/eye protection/face protection. -P302+P352: IF ON SKIN, Wash with plenty of soap and water. -P321: Specific treatment (see supplemental first aid instructions on this label) -P333+P313: If skin irritation or rash occurs: Get medical advice/attention -P363: Wash contaminated clothing before reuse. -P501: Dispose of contents/container to an approved waste disposal plant.</p> <p>Hazards not otherwise classified (HNOC): -None identified.</p>

Section 3- COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS-No	Molecular Weight
Palladium	7440-05-3	106.42 g/mol

Section 4- FIRST AID MEASURES

INHALATION: Remove victim from exposure to fresh air. Give oxygen if breathing is difficult. If not breathing, give artificial respiration.

SKIN CONTACT: Wash off with soap and plenty of water while removing all contaminated clothes and shoes. Seek medical attention if irritation develops or persists.

EYE CONTACT: Do not rub eyes. Flush eyes with plenty of water, lifting upper and lower lids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

INGESTION: Rinse mouth with water. Never give anything by mouth to an unconscious person.

MOST IMPORTANT SYMPTOMS/EFFECTS: The most important known symptoms and effects are described in the labeling (see section 2) and/or in section 11.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: No data available

Section 5- FIREFIGHTING MEASURES

Suitable Extinguishing Media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable Extinguishing Media:

No information available

Specific Hazards Arising from the Chemical:

No information available

Protective Equipment & Precautions for Firefighters:

As in any fire, Firefighters must wear full face, self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective clothing to prevent contact with skin and eyes.

Further Information:

The product itself does not burn.

Section 6- ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid dust formation. Avoid breathing vapors, mist or gas. For personal protection see section 8.

Environmental Precautions: No special environmental precautions required.

Methods for Containment & Clean Up:

Sweep up and shovel. Keep in suitable, closed containers for disposal. For waste disposal, see Section 13.

Section 7- HANDLING AND STORAGE

Handling: Provide appropriate exhaust ventilation at places where dust is formed. Wear appropriate personal protection equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling.

Storage: Keep container tightly closed in a dry and well-ventilated place.

Section 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Components with Workplace Control Parameters:

Contains no substances with occupational exposure limit values.

Personal Protective Equipment:

Eye/Face Protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and Body Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Choose body protection in relation to its type, to the concentration and amount of the dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the specific workplace.

Respiratory Protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: No special environmental precautions required.

Section 9- PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting Point/Range: 1,554°C (2,829°F) – lit.

Initial Boiling Point/Range: 2,970°C (5,378°F) – lit.

Flash Point: No data available

Evaporation Rate: No data available

Flammability (solid,gas): No data available

Flammability or Explosive Limits:

Upper: No data available

Lower: No data available

Vapor Pressure: No data available

Vapor Density: No data available

Relative Density: 12.2 g/cm³

Solubility (Water): No data available

Partition coefficient; n-octanol/water: No data available

Auto Ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Explosive Properties: No data available

Oxidizing Properties: No data available

Section 10- STABILITY AND REACTIVITY

Reactive Hazard: No data available

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: No information available

Conditions to Avoid: Contact with incompatible products.

Incompatible Materials: Strong acids, halogens

Hazardous Decomposition Products:

Hazardous decomposition products formed under fire conditions – Nature of decomposition products not known.

Other decomposition products - No data available

Section 11- TOXICOLOGICAL INFORMATION

Toxicological Effects:

Acute Toxicity: No information available

Inhalation: No information available.

Dermal: No information available

Skin Corrosion/Irritation: No information available

Serious eye damage/irritation: No information available

Respiratory or Skin Sensitization: No information available

Carcinogenicity:

-IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.
 -ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
 -NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
 -OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Mutagenic Effects: No information available**Reproductive Effects:** No information available**Development Effects:** No information available**STOT – single exposure:** No information available**STOT – repeated exposure:** No information available**Aspiration Hazard:** No information available**Additional Information: (RTECS: Not available)****Section 12- ECOLOGICAL INFORMATION****Toxicity:** No information available**Persistence and Degradability:** No information available**Bioaccumulation/Accumulation:** No information available**Mobility in Soil:** No information available**Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.**Other Adverse Effects:** No information available**Section 13- DISPOSAL CONSIDERATIONS****Waste Disposal Methods:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dispose of contaminated packaging as unused product.**Section 14- TRANSPORT INFORMATION****DOT:** Not regulated as dangerous goods**IATA:** Not regulated as dangerous goods**IMDG/IMO:** Not regulated as dangerous goods**Section 15- REGULATORY INFORMATION****US Federal Regulations:****SARA 302:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302**SARA 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313**SARA 311/312 Hazardous Chemical:** No**HMIS (USA):****Health Hazard:** 0**Chronic Health Hazard:****Flammability:** 0**Physical Hazard:** 0

National Fire Protection Association (USA):**Health Hazard: 0****Fire Hazard: 0****Reactivity Hazard: 0****US Massachusetts RTK – Substance List:** Not regulated**US New Jersey Right-to-Know Act:**

Component	CAS No.	Revision Date
Palladium	7440-05-3	199-02-16

US Pennsylvania RTK – Hazardous Substances:

Component	CAS No.	Revision Date
Palladium	7440-05-3	1993-02-16

US California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.**Section 16- OTHER INFORMATION**

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulations are subject to change, the conditions of handling and use, or misuse are beyond our control, Plasmaterials, Inc. makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Users should satisfy themselves that they have all current data relevant to their particular use.

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