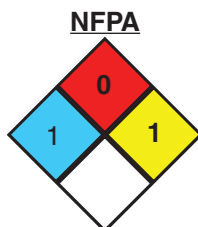


MATERIAL SAFETY DATA SHEET

Palladium (II) Nitrate Hydrate



HMIS

HEALTH	1
FLAMMABILITY	0
REACTIVITY	1
PERSONAL PROTECTION	C

1. Product And Company Identification

Supplier

DF Goldsmith Chemical and Metal
909 Pitner Avenue
Evanston, IL 60202, USA

Telephone Number: 847-869-7800

FAX Number: 847-869-2531

E-mail: goldchem@aol.com

Web Site: www.dfgoldsmith.com

Manufacturer

DF Goldsmith Chemical and Metal
909 Pitner Avenue
Evanston, IL 60202, USA

Telephone Number: 847-869-7800

FAX Number: 847-869-2531

E-mail: goldchem@aol.com

Web Site: www.dfgoldsmith.com

Supplier Emergency Contacts & Phone Number

Chemtrac: 800-424-9300

Supplier Emergency Contacts & Phone Number

Chemtrac: 800-424-9300

Issue Date: 05/17/2011

Product Name: Palladium (II) Nitrate Hydrate

Chemical Name: Palladium (II) Nitrate/Palladous Nitrate

CAS Number: 10102-05-3

Chemical Family: Platinum Group Metal Salts

Chemical Formula: $\text{Pd}(\text{NO}_3)_2 \cdot 2\text{H}_2\text{O}$

MSDS Number: 46-261

Product Code: 46-261

Synonyms

Palladium Dinitrate, Palladium Nitrate

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Palladium (II) Nitrate	10102-05-3	

EMERGENCY OVERVIEW

Oxidizing. Irritant. Contact with combustible material may cause fire. Irritating to eyes, respiratory system and skin.

Target organ(s): Blood. Central nervous system.

Hazards Identification (Pictograms)



MATERIAL SAFETY DATA SHEET

Palladium (II) Nitrate Hydrate

3. Hazards Identification

Primary Routes(s) Of Entry

Eye Contact
Ingestion - possible, but considered unlikely.
Inhalation
Skin Contact

Eye Hazards

Can cause eye Irritation.

Skin Hazards

Can cause skin irritation.

Ingestion Hazards

Harmful if swallowed. Does not cause serious toxic manifestations

Inhalation Hazards

Causes respiratory tract irritation.

Subchronic (Target Organ Effects)

Blood and Central Nervous Systems.

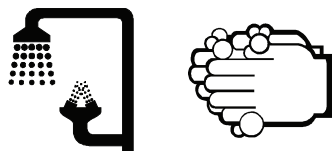
Conditions Aggravated By Exposure

May cause irritation of the respiratory system. Maintain housekeeping and personal hygiene to minimize exposure and prevent sensitization.

Conditions Aggravated By Overexposure

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

First Aid (Pictograms)



4. First Aid Measures

Eye

Flush for 15 minutes with plenty of water. If discomfort occurs or persists, contact a physician.

Skin

Flush area for 15 minutes with water and wash with soap and water. If discomfort occurs or persists, contact a physician. Remove contaminated clothing and shoes and wash before reuse.

Ingestion

Not expected to be a problem in industry. However if swallowed and discomfort occurs, contact a physician.

Inhalation

Remove to fresh air immediately. If discomfort occurs or persists, contact a physician.

Fire Fighting (Pictograms)



MATERIAL SAFETY DATA SHEET

Palladium (II) Nitrate Hydrate

5. Fire Fighting Measures

Flash Point Method: NA

Flammability Class: NA

Fire And Explosion Hazards

Use proper safety equipment. Can decompose to emit toxic nitrous oxide (NOx) gases.

Extinguishing Media

Use water spray, foam, dry chemical, carbon dioxide or medium for primary source.

Fire Fighting Instructions

Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Contact with other material may cause fire. Emits toxic fumes under fire conditions.

EXPOSURE HAZARD(S)

Material: Irritant.

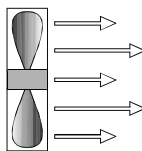
6. Accidental Release Measures

Avoid generating dust.

Clean up spill immediately.

Sweep up and remove immediately.

Handling and Storage (Pictograms)



7. Handling and Storage

Handling And Storage Precautions

Avoid contact with eyes, prolonged or repeated contact with skin. Avoid breathing dust. Use compatible chemical-resistant gloves. Wash hands thoroughly after handling.

Handling Precautions

Avoid breathing dust or vapor. Avoid contact with eyes. Avoid contact with skin and clothing. Keep away from combustible material, heat, sparks, and open flame.

Storage Precautions

Do not store directly on ground. Keep away from heat, sparks, flame, and other sources of ignition.... Store in a dry place.

Work/Hygienic Practices

Use good personal hygiene. Wash thoroughly after handling. Wash thoroughly with soap and water after handling.

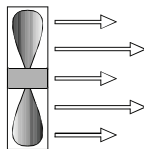
Other Precautions

0.01 mg/m2 high efficiency particular respirator/supplied air respirator/self-contained breathing apparatus; 0.2 mg/m2 same as above with full face piece; 1 mg/m3 powdered air purifying respirator with high efficiency filter/type C supplied air respirator operated in pressure demand mode. Store in a sealed container, plastic or plastic liner, in a cool, well ventilated, dry area away from volatile acids.

MATERIAL SAFETY DATA SHEET

Palladium (II) Nitrate Hydrate

Protective Clothing (Pictograms)



8. Exposure Controls/Personal Protection

Engineering Controls

Ventilation: Local Exhaust: Required in handling area
Mechanical: Desirable to insure concentration of material below TLV/TWA levels
Other: NA

Eye/Face Protection

ANSI approved safety glasses/goggles

Skin Protection

Rubber/Neoprene (use compatible chemical-resistant gloves).

Respiratory Protection

Chemical cartridge respirator for dust/mist/fume/radionuclide, or self-contained breathing apparatus with full face shield.

Other/General Protection

Lab coat/apron, flame and chemical resistant protective clothing, eye wash, safety shower, and hygiene facilities for washing.

9. Physical And Chemical Properties

Appearance

Dark Brown/Black Crystals

Odor

Nitrous oxide odor

Chemical Type: Mixture

Physical State: Solid

Melting Point: Decomposes °C

Boiling Point: NA °C

Specific Gravity: NE

Molecular Weight: 266.46

Vapor Pressure: NA

Vapor Density: NA

pH Factor: NA

Solubility: Soluble w/ Turbidity

Evaporation Rate: NA

MATERIAL SAFETY DATA SHEET

Palladium (II) Nitrate Hydrate

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Elevated temperature, air, light, and moisture sensitive.

Incompatible Materials

Mixing with reducing agents

Hazardous Decomposition Products

Nitrous Oxide (NOx) gases

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation

NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.

14. Transport Information

Proper Shipping Name

Nitrates, inorganic, n.o.s.

Hazard Class

5.1

Secondary Hazard Class

NA

DOT Identification Number

1477

DOT Shipping Label

Nitrates, inorganic, n.o.s.

Freight Class

See 49 CFR

Packaging Exceptions

See 49 CFR

Packaging Requirements

PGII

Additional Shipping Paper Description

IATA: Same as DOT regulation 49 CFR. Consult IATA regulation for further information.

MATERIAL SAFETY DATA SHEET

Palladium (II) Nitrate Hydrate

DOT (Pictograms)



TDG - Canada (Pictograms)



15. Regulatory Information

U.S. Regulatory Information

This chemical is TSCA listed.

SARA Section 313 Notification

This product is subject to SARA Section 313 reporting requirements - Nitrate Compounds (Water Dissociable).

Canadian Regulatory Information

This information and product has been classified in accordance with the hazard criteria of CPR, and the MSDS contains all the information required by the CPR.

European Union (EU) Regulatory Information

Sign of Danger: O, Xi

Indication of Danger: Oxidizing, and Irritant

R: 8, 36/37/38

Risk Phrase: Contact with combustible material may cause fire. Irritating to eyes, respiratory system, and skin.

S: 36, 17, 26

Safety Phrase: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Keep away from combustible material, Wear suitable protective clothing.

Other International Regulations

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Oxidizing, Irritant.

Risk Statements: Contact with combustible material may cause fire. Irritating to eyes, respiratory system and skin.

Safety Statements: Keep away from combustible material. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

US Statements: Target organ(s): Blood. Central nervous system.

WHMIS - Canada (Pictograms)



DSCL - Europe (Pictograms)



MATERIAL SAFETY DATA SHEET

Palladium (II) Nitrate Hydrate

16. Other Information

NFPA Rating

Health: 3

Fire: 0

Reactivity: 2

Irritant: OX

HMIS Rating

Health: 3

Fire: 0

Reactivity: 2

Personal Protection: J

Precautionary Label

Oxidizing and Irritant

Revision/Preparer Information

MSDS Preparer: DF Goldsmith Chemical and Metal

MSDS Preparer Phone Number: 847-869-7800

This MSDS Supersedes A Previous MSDS Dated: 03/15/1998

Disclaimer

In compliance with the OSHA Hazard Communication Standard, 29 C.F.R 1910.1200, we are providing you with a Materials Safety Data Sheet (MSDS) for the hazardous material you are purchasing.

It is your responsibility to educate your employees on the safe use of the hazardous material. With this in mind, a copy should be forwarded to the supervisor of the user or to the user themselves, and copy should be retained in your files for future reference.

DF Goldsmith Chemical and Metal makes no presentation as to the accuracy of the information in the MSDS. The information is believed to be correct; however, you (the customer), should perform your own investigation and independent verification. If you resell the product, you are responsible to forward the information in the MSDS to your customer.