

# MATERIAL SAFETY DATA SHEET



## Palladium (II) Nitrate Hydrate

Ru
Rh
Pd
Ag
Re
Os
Ir
Pt
Au

|                     |   |        |   |              |   |            |   |                     |   |
|---------------------|---|--------|---|--------------|---|------------|---|---------------------|---|
| <p><b>NFPA</b></p>  | <p><b>HMIS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #00b0f0; color: white;">HEALTH</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="background-color: #ff0000; color: white;">FLAMMABILITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #ffff00; color: black;">REACTIVITY</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: #cccccc;">PERSONAL PROTECTION</td> <td style="text-align: center;">J</td> </tr> </table> | HEALTH | 3 | FLAMMABILITY | 0 | REACTIVITY | 2 | PERSONAL PROTECTION | J |
| HEALTH              | 3   |        |   |              |   |            |   |                     |   |
| FLAMMABILITY        | 0   |        |   |              |   |            |   |                     |   |
| REACTIVITY          | 2   |        |   |              |   |            |   |                     |   |
| PERSONAL PROTECTION | J   |        |   |              |   |            |   |                     |   |

### 1. Product And Company Identification

|  |  |
|--|--|
| <p><b>Supplier</b><br/>                 Colonial Metals, Inc.<br/>                 Building 20<br/>                 505 Blue Ball Road<br/>                 Elkton, MD 21921 United States</p> <p><b>Company Contact:</b> Wayne Sher<br/> <b>Telephone Number:</b> 410-398-7200<br/> <b>FAX Number:</b> 410-398-2918<br/> <b>E-Mail:</b> wsher@colonialmetals.com<br/> <b>Web Site:</b> colonialmetals.com</p> | <p><b>Manufacturer</b><br/>                 Colonial Metals, Inc.<br/>                 Building 20<br/>                 505 Blue Ball Road<br/>                 Elkton, MD 21921 United States</p> <p><b>Company Contact:</b> Wayne Sher<br/> <b>Telephone Number:</b> 410-398-7200<br/> <b>FAX Number:</b> 410-398-2918<br/> <b>E-Mail:</b> wsher@colonialmetals.com<br/> <b>Web Site:</b> colonialmetals.com</p> |
| <p><b>Supplier Emergency Contacts &amp; Phone Number</b><br/>                 Chemtrac: 800-424-9300<br/>                 World Wide - Call COLLECT to U.S: 703-527-3887</p>   | <p><b>Manufacturer Emergency Contacts &amp; Phone Number</b><br/>                 Chemtrac: 800-424-9300<br/>                 World Wide - Call COLLECT to U.S: 703-527-3887</p>   |

**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:** Pd(NO<sub>3</sub>)<sub>2</sub>.2H<sub>2</sub>O  
**MSDS Number:** 5004  
**Product Code:** 5004

**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)****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)**

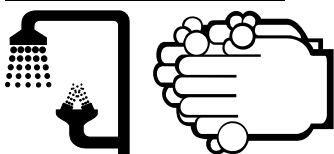
Blood and Central Nervous Systems.

**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.

**4. First Aid Measures - Continued**

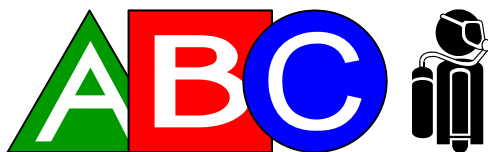
**Ingestion**

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)**



**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 & 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.

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### 7. Handling And Storage - Continued

#### 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/m<sup>2</sup> high efficiency particular respirator/supplied air respirator/self-contained breathing apparatus; 0.2 mg/m<sup>2</sup> same as above with full face piece; 1 mg/m<sup>3</sup> 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.

#### 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

**Palladium (II) Nitrate Hydrate****Ru Rh Pd Ag Re Os Ir Pt Au****9. Physical And Chemical Properties - Continued**

**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

**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

**Palladium (II) Nitrate Hydrate****Ru Rh Pd Ag Re Os Ir Pt Au****14. Transport Information - Continued****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.

**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.

**Palladium (II) Nitrate Hydrate****Ru Rh Pd Ag Re Os Ir Pt Au****15. Regulatory Information - Continued****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)****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: Wayne Sher

MSDS Preparer Phone Number: 410-398-7200

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

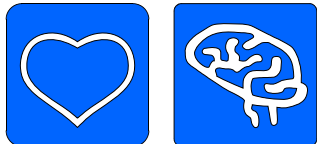
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### Other (Pictograms)



### 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.

Colonial Metals, Inc. 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.

Colonial Metals, Inc.

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