


**Palladium (II) Cyanide**

Ru	Rh	Pd	Ag	Re	Os	Ir	Pt	Au
----	----	----	----	----	----	----	----	----

<b>NFPA</b> 	<b>HMIS</b> <table border="1"> <tr> <td style="background-color: #00B0F0;">HEALTH</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="background-color: #FF0000;">FLAMMABILITY</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="background-color: #FFFF00;">REACTIVITY</td> <td style="text-align: center;">1</td> </tr> <tr> <td>PERSONAL PROTECTION</td> <td style="text-align: center;">J</td> </tr> </table>	HEALTH	3	FLAMMABILITY	0	REACTIVITY	1	PERSONAL PROTECTION	J
HEALTH	3								
FLAMMABILITY	0								
REACTIVITY	1								
PERSONAL PROTECTION	J								

**1. Product And Company Identification**

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

**Issue Date:** 11/24/2010

**Product Name:** Palladium (II) Cyanide  
**Chemical Name:** Palladium (III) Cyanide, Palladium Cyanide  
**CAS Number:** 2035-66-7  
**Chemical Family:** Platinum Group Metal Salts  
**Chemical Formula:** Pd (CN)<sub>2</sub>  
**MSDS Number:** 5008  
**Product Code:** 5008

**2. Composition/Information On Ingredients**

Ingredient Name	CAS Number	Percent Of Total Weight
Palladium (II) Cyanide	2035-66-7	99.9

**EMERGENCY OVERVIEW**

To the best of our knowledge the chemical, physical, and toxicological properties have not been thoroughly investigated. Avoid elevated temperature. Product incompatible with strong oxidizers, such as nitrates or chlorates, acids and acid salts. May decompose poisonous hydrogen cyanide gas at high temperature. Heating may cause explosion. Very toxic. Dangerous to the environment.

**Palladium (II) Cyanide**

Ru Rh Pd Ag Re Os Ir Pt Au

**3. Hazards Identification****Primary Routes(s) Of Entry**

Inhalation: Likely  
Skin: Likely  
Ingestion: Likely

**Eye Hazards**

Irritation

**Skin Hazards**

Irritation, rash or itching. Dangerous if absorbed through the skin.

**Ingestion Hazards**

Poisonous, obtain medical attention immediately.

**Inhalation Hazards**

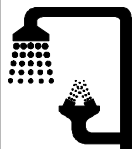
Irritation of the upper respiratory tract and mucous membranes.

**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**

Non-volatile salts of cyanide appear to be relatively non toxic systematically, unless they are ingested and care is taken to prevent the formation of hydrocyanic acid. Exposure to small amounts of cyanide compounds for prolonged periods can cause loss of appetite, headache, weakness, nausea and dizziness.

**First Aid (Pictograms)****4. First Aid Measures****Eye**

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

**Skin**

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

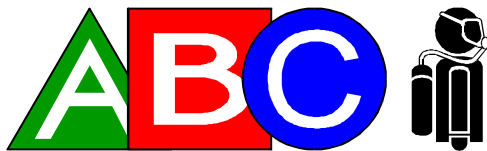
**Ingestion**

Not expected to be a problem in industry. However if swallowed DO NOT induce vomiting, contact a physician immediately.

**Inhalation**

Remove to fresh air immediately. If victim is not breathing perform artificial respiration. Keep victim warm. Contact a physician immediately.

**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 poisonous hydrogen cyanide gas which burns easily and may explode.

**Extinguishing Media**

Product is not flammable, use media to fight surrounding fire.

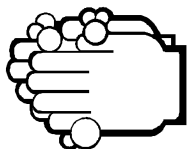
**Fire Fighting Instructions**

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

**6. Accidental Release Measures**

Sweep or soak up and place in a sealed container. Person protected with full face shield and proper respirator for dust/mist/fume/radionuclide. Ensure adequate ventilation.

**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.

**Handling Precautions**

Ensure good ventilation. Wear proper personal protective equipment.

**Storage Precautions**

Keep in a tightly sealed container in a cool, dry place away from acids.

**Work/Hygienic Practices**

Always use good personal hygiene 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.

**Palladium (II) Cyanide**

Ru Rh Pd Ag Re Os Ir Pt Au

**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: Yes, as cyanide - exposure is 5 mg/m<sup>3</sup>, skin

Safety shower and eyewash

**Eye/Face Protection**

ANSI approved safety glasses/goggles

**Skin Protection**

Rubber/Neoprene (use compatible chemical-resistant impervious 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**

Yellowish-white crystalline powder.

**Chemical Type:** Mixture

**Physical State:** Solid

**Melting Point:** 932 °F 500 °C

**Boiling Point:** NA °C

**Specific Gravity:** NE

**Molecular Weight:** 158.4

**Vapor Pressure:** NA

**Vapor Density:** NA

**pH Factor:** NA

**Solubility:** Insoluble

**Evaporation Rate:** NA

**10. Stability And Reactivity**

**Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Conditions To Avoid (Stability)**

Elevated temperature

**Palladium (II) Cyanide**

Ru Rh Pd Ag Re Os Ir Pt Au

**10. Stability And Reactivity - Continued****Incompatible Materials**

Strong oxidizers, such as nitrates or chlorates, acids and acids salts.

**Hazardous Decomposition Products**

Poisonous hydrogen cyanide gas at high temperature, nitrogen oxides, carbon monoxide, carbon dioxide  
Danger of explosion.

**11. Toxicological Information**

Hydrocyanic acid gas is highly toxic via oral, dermal and inhalation. It inhibits tissue oxidation and causes death by asphyxia. In acute cases, death is extremely rapid.

**Ecological (Pictograms)****12. Ecological Information**

Very toxic to fish.

**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**

Cyanides, Inorganic, Solid, N.O.S.

**Hazard Class**

6.1

**DOT Identification Number**

UN1588

**Packaging Requirements**

PG II

IATA: Always check IATA regulations before shipping.

**15. Regulatory Information****U.S. Regulatory Information**

All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

**SARA Section 313 Notification**

This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

**Palladium (II) Cyanide****Ru Rh Pd Ag Re Os Ir Pt Au****15. Regulatory Information - Continued****Canadian Regulatory Information**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS ALDRICH - 398292 www.sigma-aldrich.com Page 4 contains all the information required by the CPR.

DSL: No

NDSL: Yes

**European Union (EU) Regulatory Information**

Symbol of Danger: T+-N

Indication of Danger: Very toxic. Dangerous for the environment.

R: 26/27/28-32-50/53

Risk Statements: Very toxic by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S: 7-28-29-45-60-61

Safety Statements: Keep container tightly closed. After contact with skin, wash immediately with plenty of water. Do not empty into drains. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

**DSCL - Europe (Pictograms)****16. Other Information****NFPA Rating**

Health: 3

Fire: 0

Reactivity: 1

Other: TOX

**HMIS Rating**

Health: 3

Fire: 0

Reactivity: 1

Personal Protection: J

**Revision/Preparer Information**

MSDS Preparer: Wayne Sher

MSDS Preparer Phone Number: 410-398-7200

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

# MATERIAL SAFETY DATA SHEET



## Palladium (II) Cyanide

Ru Rh Pd Ag Re Os Ir Pt Au

### 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.

Printed Using MSDS Generator™ 2000