


# MATERIAL SAFETY DATA SHEET

## Palladium (II) Nitrate Solution

<b>NFPA</b> 	<b>HMIS</b> <table border="1"><tr><td>HEALTH</td><td>3</td></tr><tr><td>FLAMMABILITY</td><td>0</td></tr><tr><td>REACTIVITY</td><td>1</td></tr><tr><td>PERSONAL PROTECTION</td><td>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

**Supplier**

Colonial Metals, Inc.  
Building 20  
505 Blue Ball Road  
Elkton, MD 21921 United States

**Company Contact:** Joseph Fittos III  
**Telephone Number:** 410-398-7200  
**FAX Number:** 410-398-2918  
**E-Mail:** jfittos@colonialmetals.com  
**Web Site:** colonialmetals.com

**Manufacturer**

Colonial Metals, Inc.  
Building 20  
505 Blue Ball Road  
Elkton, MD 21921 United States

**Company Contact:** Joseph Fittos III  
**Telephone Number:** 410-398-7200  
**FAX Number:** 410-398-2918  
**E-Mail:** jfittos@colonialmetals.com  
**Web Site:** colonialmetals.com

**Supplier Emergency Contacts & Phone Number**

**Chemtrac:** 800-424-9300  
**World Wide - Call COLLECT to U.S:** 703-527-3887

**Manufacturer Emergency Contacts & Phone Number**

**Chemtrac:** 800-424-9300  
**World Wide - Call COLLECT to U.S:** 703-527-3887

**Issue Date:** 03/12/2009

**Product Name:** Palladium (II) Nitrate Solution  
**Chemical Name:** Palladium (II) Nitrate/Palladous Nitrate  
**CAS Number:** 10102-05-3  
**Chemical Family:** Inorganic Salt  
**Chemical Formula:** Pd(NO<sub>3</sub>)<sub>2</sub>xH<sub>2</sub>O  
**MSDS Number:** 5011  
**Product Code:** 5011-S

**Synonyms**

PALLADIUM DINITRATE \* PALLADIUM NITRATE \*

### 2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Percent Of Total Weight
Nitric Acid	7697-37-2	20 - 30
Palladium Metal	7440-05-3	1 - 15
Water	7732-18-5	50 - 70

### EMERGENCY OVERVIEW

**Corrosive.**

**Causes burns.**

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## Palladium (II) Nitrate Solution

### Hazards Identification (Pictograms)



### 3. Hazards Identification

#### Primary Routes(s) Of Entry

Eye: Likely  
Inhalation: Likely  
Skin: Likely  
Ingestion: Likely

#### Eye Hazards

Causes burns.

#### Skin Hazards

Causes burns. May be harmful if absorbed through the skin.

#### Ingestion Hazards

May be harmful if swallowed.

#### Inhalation Hazards

May be harmful if inhaled. Material is extremely destructive to the tissue of the upper respiratory tract and mucous membranes.

#### Subchronic (Target Organ Effects)

Blood and Central Nervous System.

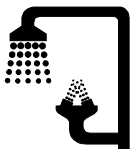
#### Chronic/Carcinogenicity Effects

No chronic affects noted at this time.

#### Conditions Aggravated By Exposure

May cause irritation of the respiratory system. Exposure to nitric acid causes tissue corrosion from topical contact and acute pulmonary edema or chronic obstructive pulmonary disease from inhalation.

### First Aid (Pictograms)



### 4. First Aid Measures

#### Eye

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

#### Skin

Wash with copious amounts of water for at least 15 minutes. If discomfort occurs or persists, contact a physician immediately. Remove contaminated clothing and shoes and wash before reuse.

#### Ingestion

If swallowed, wash out mouth with water provided victim is conscious. Never give anything by mouth to an unconscious person. Contact a physician immediately. DO NOT induce vomiting.

# MATERIAL SAFETY DATA SHEET

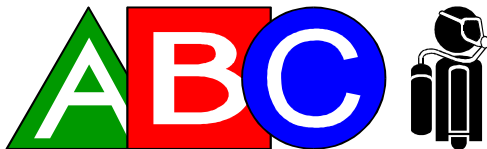
## Palladium (II) Nitrate Solution

### 4. First Aid Measures - Continued

#### Inhalation

Remove to fresh air immediately. If victim is not breathing provide artificial respiration. If breathing is difficult supply oxygen. Contact a physician immediately.

#### Fire Fighting (Pictograms)



### 5. Fire Fighting Measures

**Flash Point:** NA °C

**Autoignition Point:** NA °C

**Flammability Class:** NA

#### Fire And Explosion Hazards

Use proper safety equipment. This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Can decompose to emit fumes under fire conditions.

#### Extinguishing Media

Carbon dioxide, dry chemical powder or appropriate foam.

#### Fire Fighting Instructions

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

### 6. Accidental Release Measures

Dike major spills. Neutralize with dry lime or soda ash, soak up and place in a sealed container. Person protected with full face shield and proper respirator for dust/mist/fume, rubber/neoprene gloves and rubber apron. Ventilate and wash spill site after clean up is complete.

#### Handling & Storage (Pictograms)



### 7. Handling And Storage

#### Handling And Storage Precautions

#### Handling Precautions

Do not breath vapor. Do not get in eyes, on skin or clothing. Avoid prolonged or repeated exposure. Ensure adequate ventilation.

#### Storage Precautions

Keep in a tightly sealed container in a cool, dry place.

# MATERIAL SAFETY DATA SHEET

## Palladium (II) Nitrate Solution

### 7. Handling And Storage - Continued

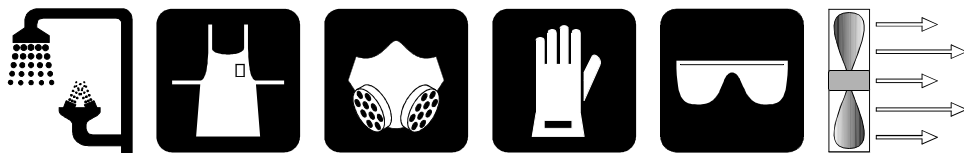
#### Work/Hygienic Practices

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

#### Other Precautions

0.01 ppm high efficiency particulate respirator/supplied air respirator/self-contained breathing apparatus; 0.2 ppm same as above with full face piece; 1 ppm 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: Closed Ventilation system with corrosive-resistant materials

Safety shower and eyewash

#### Eye/Face Protection

ANSI approved safety glasses/goggles, full face shield

#### Skin Protection

Rubber/Neoprene (use compatible chemical-resistant gloves)

#### Respiratory Protection

NIOSH approved chemical cartridge respirator for acid gas/chlorine (42 CFR part 84) and 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

#### Ingredient(s) - Exposure Limits

Nitric Acid  
ACGIH- 2 ppm TWA; 4 ppm STEL  
NIOSH - 2 ppm TWA; 5mg/m<sup>3</sup> TWA 25 ppm IDLH  
OSHA -Final PELs - 2 ppm TWA; 5 mg/m<sup>3</sup> TWA

### 9. Physical And Chemical Properties

#### Appearance

Dark red-brown solution

#### Odor

Acidic

#### Odor Threshold

# MATERIAL SAFETY DATA SHEET

## Palladium (II) Nitrate Solution

### 9. Physical And Chemical Properties - Continued

#### Odor Threshold - Continued

**Chemical Type:** Mixture  
**Physical State:** Liquid  
**Specific Gravity:** 1.118 g/cm<sup>3</sup>  
**Molecular Weight:** 230.42  
**pH Factor:** 1  
**Solubility:** Fully miscible

### 10. Stability And Reactivity

**Stability:** Stable  
**Hazardous Polymerization:** Will not occur

#### Conditions To Avoid (Stability)

MAY DISCOLOR ON EXPOSURE TO LIGHT.

#### Incompatible Materials

Alcohols, alkali metals, amines, bases, aluminum, brass copper, copper alloys corrodes steel, galvanized iron, organic materials, reducing agents.

#### Hazardous Decomposition Products

Nitrous oxides, palladium oxides.

### 11. Toxicological Information

#### Subchronic (Target Organ Effects)

Blood. Central Nervous System.

#### Chronic/Carcinogenicity

### 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

Corrosive liquid, acidic, inorganic, n.o.s.

#### Hazard Class

8

#### DOT Identification Number

3264

#### DOT Shipping Label

Corrosive

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## Palladium (II) Nitrate Solution

### 14. Transport Information - Continued

#### Packaging Requirements

PG II

#### Additional Shipping Paper Description

IATA: Same as 49 CFR (DOT) regulation. Refer to IATA regulations for further shipping regulations.

#### DOT (Pictograms)



### 15. Regulatory Information

#### U.S. Regulatory Information

This product is TSCA listed.

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

#### 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.

DSL: No

NDSL: No

#### European Union (EU) Regulatory Information

Symbol of Danger: C

Indication of Danger: Corrosive

R: 34

Risk Statements: Causes burns.

S: 26- 36/37/39-45

Safety Statements: 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. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### DSCL - Europe (Pictograms)



### 16. Other Information

#### NFPA Rating

Health: 3

Fire: 0

Reactivity: 1

Other: OX

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## Palladium (II) Nitrate Solution

### 16. Other Information - Continued

#### HMIS Rating

Health: 3

Fire: 0

Reactivity: 1

Personal Protection: J

#### Revision/Preparer Information

MSDS Preparer: Joseph J. Fittos III

MSDS Preparer Phone Number: 410-398-7200

This MSDS Supersedes A Previous MSDS Dated: 05/10/2001

### 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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