


MATERIAL SAFETY DATA SHEET

Tetraamminepalladium (II) Nitrate Solution

NFPA 	HMIS <table border="1"><tr><td>HEALTH</td><td style="text-align: center;">3</td></tr><tr><td>FLAMMABILITY</td><td style="text-align: center;">0</td></tr><tr><td>REACTIVITY</td><td style="text-align: center;">0</td></tr><tr><td>PERSONAL PROTECTION</td><td style="text-align: center;">J</td></tr></table>	HEALTH	3	FLAMMABILITY	0	REACTIVITY	0	PERSONAL PROTECTION	J
HEALTH	3								
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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: 07/23/2008 Product Name: Tetraamminepalladium (II) Nitrate Solution Chemical Name: Tetraammine Palladous Nitrate Solution CAS Number: 13601-08-6 Chemical Family: Platinum Group Metal Salts Chemical Formula: (NH ₃) ₄ Pd(NO ₃) ₂ MSDS Number: 5018 Product Code: 5018-S	

2. Composition/Information On Ingredients			
Ingredient Name	CAS Number		Percent Of Total Weight
Ammonia Hydroxide	1336-21-6		0 - 5
Ammonium Nitrate	6468-52-2		0 - 51
Tetraammine Palladium (II)	13601-08-6		0 - 5

EMERGENCY OVERVIEW
Oxidizing. Irritant. Explosive when dry. Contact with combustible material may cause fire. To the best of our knowledge the chemical, physical, and toxicological properties of this compound have not been thoroughly investigated.

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Hazards Identification (Pictograms)



3. Hazards Identification

Primary Routes(s) Of Entry

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

Eye Hazards

Irritation; Exposure to high concentration of ammonia gas may cause blindness.

Skin Hazards

Irritation; possible burns or blister formation. May be harmful through skin absorption.

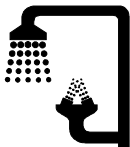
Ingestion Hazards

Irritation; burning pain in the mouth, throat, stomach, thorax; coughing followed by vomiting or diarrhea. May be harmful if swallowed.

Inhalation Hazards

Irritation to the upper respiratory tract and mucous membranes; possible convulsions or shock. May be harmful if inhaled.

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

Immediately wash with soap and copious amounts of water. If discomfort occurs or persists, contact a physician immediately. Remove contaminated clothing and shoes and wash before reuse.

Ingestion

Wash out mouth with water provided the victim is conscious. Never give anything by mouth to an unconscious person. Contact a physician immediately.

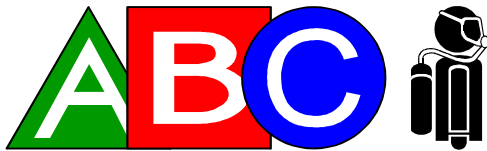
Inhalation

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

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Fire Fighting (Pictograms)



5. Fire Fighting Measures

Flash Point: NA °C

Autoignition Point: NA °C

Flammability Class: NA

Fire And Explosion Hazards

Dry material explodes when heated.

May be shock sensitive if dry.

May accelerate combustion.

Emits toxic fumes under fire conditions.

Extinguishing Media

Use water spray.

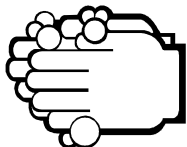
Fire Fighting Instructions

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

6. Accidental Release Measures

Neutralize with dilute HCL solution. Cover with dry-lime, sand, or soda ash and sweep or soak up and place in sealed container using non-sparking tools. Person protected with full face shield and proper respirator for ammonia vapor. Ventilate area and wash spill site after pick up is complete.

Handling & Storage (Pictograms)



7. Handling And Storage

Handling Precautions

Avoid breathing vapor and dust. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.

Storage Precautions

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

Work/Hygienic Practices

Always use good personal hygiene after handling.

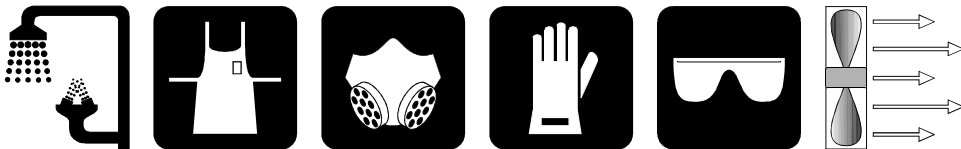
Other Precautions

0.01 ppm high efficiency particular 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.

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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

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 ammonia vapors 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

Colorless to slight yellow liquid

Odor

Ammonia vapor

Chemical Type: Mixture

Physical State: Liquid

Melting Point: NA °C

Boiling Point: 100 °C

Specific Gravity: 2.01

Molecular Weight: 298.53

Packing Density: 1.03 g/cm³

Vapor Pressure: NE

Vapor Density: NE

pH Factor: 9.5-10

Solubility: Soluble

Evaporation Rate: NE

10. Stability And Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability)

Heat.

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10. Stability And Reactivity - Continued

Incompatible Materials

Strong reducing agents, organic materials, and finely powdered metals.

Hazardous Decomposition Products

Nitrous oxides (NO_x).

11. Toxicological Information

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

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.

RCRA Information

NL (Hazardous waste due to corrosivity)

14. Transport Information

No Data Available...

15. Regulatory Information

SARA Section 313 Notification

This product is subject to SARA section 313 reporting requirements.

Canadian Regulatory Information

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

DSL: No

NDSL: No

European Union (EU) Regulatory Information

Symbol of Danger: O-Xi

Indication of Danger: Oxidizing. Irritant.

R: 1-8-36/37/38

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

S: 17-26-36

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.

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DSCL - Europe (Pictograms)



16. Other Information

NFPA Rating

Health: 3

Fire: 0

Reactivity: 0

HMIS Rating

Health: 3

Fire: 0

Reactivity: 0

Personal Protection: J

Revision/Preparer Information

MSDS Preparer: Joseph J. Fittos III

MSDS Preparer Phone Number: 410-398-7200

This MSDS Supercedes A Previous MSDS Dated: 03/26/2001

Disclaimer

In compliance with the OSHA Hazard Communication Standard, 2.9 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.