

Safety Data Sheet

29 CFR 1910.1200

Section 1: Company and Product Identification

Product Name: Palladium (II) Nitrate Solution

Product Code: 5011-S

Company: Colonial Metals, Inc.
 Building 20
 505 Blue Ball Road
 Elkton, MD 21921 United States
 Company Contact: EHS Director
 Telephone Number: 410-398-7200
 FAX Number: 410-398-2918
 E-Mail : info@colonialmetals.com
 Web Site: www.colonialmetals.com



www.colonialmetals.com

Emergency Response: Supplier Emergency Contacts & Phone Number

Chemtrec: 800-424-9300

World Wide - Call COLLECT to U.S: 703-527-3887

Section 2: Hazards Identification

Hazard Pictograms:



Signal Word: Danger

Hazard Category: Skin corrosion/irritation Cat 1
 Serious eye damage/eye irritation Cat 1
 Specific target organ tox, single exp. Cat 3 (resp irrit)
 Acute tox, inh. Cat 4

Hazard Statements: H314: Causes severe skin burns and eye damage
 H318: Causes serious eye damage
 H335: May cause respiratory irritation
 H332: Harmful if inhaled

Precautionary Statements: P202: Do not handle until all safety precautions have been read and understood
 P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
 P264: Wash thoroughly after handling
 P280: Wear protective gloves/protective clothing/eye protection/face protection
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
 P402+404: Store in a dry place. Store in a closed container
 P501: Dispose of contents/container in accordance with local/national/international rules.

Hazards not otherwise classified:

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.

Section 3: Composition / Information on Ingredients

Hazardous substance (name)	Hazard Category	CAS#	Weight %
Nitric acid	Corrosive	7697-37-2	20-30
Palladium Metal		7440-05-3	1-15
Water		7732-18-5	50-70
Chemical Family: Inorganic Salt Synonyms: PALLADIUM DINITRATE * PALLADIUM NITRATE * Chemical Formula: Pd(NO ₃) ₂ xH ₂ O			

Section 4: First Aid Measures

General Info: Ensure proper ventilation.

Notable Exposure symptoms: Irritation to skin, eyes and areas of contact.

symptoms:

If ingested: Rinse mouth. Seek immediate medical attention. Clear the airway and administer artificial respiration if not breathing.

If swallowed, do not induce vomiting unless directed to do so by medical personnel.

If inhaled: Remove the victim from the contaminated area while protecting yourself from exposure by wearing an appropriate respirator. Put a similar respirator on the victim if possible. Get medical attention immediately.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Get medical attention if irritation develops or persists.

Skin contact: Take off immediately all contaminated clothing. Rinse with water thoroughly. Get medical advice if irritation develops or persists.

Additional Info: Observe for any symptoms for several hours after exposure. Follow up with medical attention if symptoms develop. Note To Physician, Treat symptomatic symptoms

Section 5: 5. Fire Fighting Measures

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

Extinguishing Method / Equipment: Carbon dioxide, dry chemical powder or appropriate foam

Method / Equipment:

Hazardous Decomposition Info: Use proper safety equipment. Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Can decompose to emit toxic fumes.

Section 6: 6. Accidental Release Measures

Personal precautions, protective equipment and procedures: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing dust. Ventilate area if easy to do so. Contact local authorities if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Containment Large Spills: Contain actively spilling material if safe and easy to do so, avoid generating dust.

Equipment and Procedures: Have emergency response team respond. Neutralize with dilute alkalies solution or use soda ash or lime. Soak up and place in sealed container for reclamation or disposal. Use proper exposure controls and personal protection equipment (See Personal Protection).

Procedures:

Small Spills: Neutralize with dilute alkalies solution or use soda ash or lime. Soak up and place in sealed container for reclamation or disposal. Use proper exposure controls and personal protection equipment (See Personal Protection).

Cleanup Procedures: Collect all contaminated media, or other cleanup materials into a waste receptacle. If cleaning surface is necessary, utilize vacuum cleaner, provided adequate ventilation is available.

Section 7: Handling and Storage

Safe Handling Do not handle until all safety precautions have been read and understood. Keep containers tightly

Precautions: closed Ensure adequate ventilation. Avoid breathing dust/vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment and wash thoroughly after handling.

Recommendations for Storage: Store in cool, dry area in a tightly closed product container.

Incompatibilities: Store away from strong acids or oxidizing agents. Refer to Section 10.

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.

Section 8: Exposure Control / Personal Protection

General / Ventilation: Local Exhaust: Required in handling area

Engineering Controls: Mechanical: Desirable to insure concentration of material below TLV/TWA levels

Other: Closed Ventilation system with corrosive-resistant materials

Work Clothing: Protective work clothing which covers skin and prevents exposures.

Eye/face protection: Wear safety glasses with side shields or goggles or face shield.

Skin Protection: Wear chemical resistant gloves.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Additional Information: Ingredient(s) - Exposure Limits
Nitric Acid

ACGIH- 2 ppm TWA; 4 ppm STEL
NIOSH - 2 ppm TWA; 5mg/m3 TWA 25 ppm IDLH
OSHA -Final PELs - 2 ppm TWA; 5 mg/m3 TWA

Section 9: Physical and Chemical Properties

State: Liquid	Melting Point: N/A	Freezing Point: N/A
Color: Dark rd brown solution	Boiling Point/Range: N/A	pH 1
Molecular Wt. 230.42	Odor: Acidic	Water Solubility: Fully Miscible
Evaporation rate: N/A	Flash Point: N/A	Part. Coeff (n-octanol/water): N/A
Upper Flam Limits: N/A	Lower Flam Limits: N/A	Vapor Pressure: N/A
VOC Content (lbs/gal): N/A	Viscosity: N/A	Autoignition Temp: N/A

Section 10: Stability and Reactivity

General: This product is stable and non-reactive under normal conditions of use. Product is not subject to hazardous polymerization. Avoid open flame and ignition sources.

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.

Decomposition products: Nitrous oxides, palladium oxides.

Section 11: Toxicological Information

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

Toxicological Information (product): Subchronic (Target Organ Effects)

Information (product): Blood. Central Nervous System.

Likely Routes of Exposure: Eye Contact
Skin Contact
Inhalation
Ingestion - possible, but considered unlikely.

Carcinogenicity or mutagenicity: No data available

Sensitization: Product is not expected to be a sensitizer.

Other Notes: None

Section 12: Ecological Information

General information: Product not tested.

Aquatic toxicity: No specific data available. Do not allow large quantities of product to reach water, ground water, water courses or sewer systems.

Degradation / Mobility info: No specific data available.

Bioaccumulative potential: No specific data available.

Section 13: Disposal Information

Product disposal: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation

Container disposal: Treat empty containers with extra care. Consult waste contractor.

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

Section 14: Transport Information

DOT: Proper Shipping Name
Corrosive liquid, acidic, inorganic, n.o.s.
Hazard Class
8
DOT Identification Number
3264
DOT Shipping Label
Corrosive
Packaging Requirements
PG II

IMO/IMDG: See regulation for information

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

OTHER: Inquire for further transport information.

Comments: None

Section 15: Regulatory Information

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

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

SARA 313 THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS - NITRATE COMPOUNDS (WATER DISSOCIABLE).

Canadian DSL: 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).

Section 16: Other Information

NFPA Rating

Health: 3
Fire: 0
Reactivity: 1
Other: OX

HMIS Rating

Health: 3
Fire: 0
Reactivity: 1
Personal
Protection: J

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 believe to be correct; however, you (the customer), should preform 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.

SDS Author: John Kerchner

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