

# SAFETY DATA SHEET

Date Printed: 05/10/2024

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Palladium Dioxide

**Product Code:** PD-OX2-05

**CAS Number:** 12036-04-3

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

Statement of Hazard: Irritant, Respiratory irritant

Acute Health Hazard: Irritant to eyes, skin, mucous membranes and respiratory system.

May be harmful by ingestion, skin absorption and inhalation.

Chronic Health Hazard: Not Available

HMIS Rating: H:1 F:0 P:0

NFPA Rating: H:1 F:0 R:0

To the best of our knowledge, the toxicological properties of this chemical have not been thoroughly investigated. Use appropriate procedures and precautions to prevent or minimize exposure.

Pictogram:



Signal Word: Warning

Hazard Statement(s): H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

Precautionary Statement(s): P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.  
P302+P352 IF ON SKIN: wash with plenty of soap and water.  
P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P332+P313 IF SKIN irritation occurs: Get medical advice/attention.

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name: Palladium dioxide hydrate 99.99%  
CAS Number: 12036-04-3  
MDL Number: MFCD00054017  
EINECS Number: 234-836-4  
Beilstein Registry Number: Not Available  
Molecular Formula:  $\text{PdO}_2 \cdot x\text{H}_2\text{O}$   
Molecular Weight: 138.42  
Content: As specified in product name.

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### **SECTION 4. FIRST AID MEASURES**

Eye Contact: Flush eyes with large amounts of water for fifteen minutes. Separate eyelids with fingers. If irritation persists, seek medical attention.  
Skin Contact: Wash skin with soap and water. If irritation persists, seek medical attention.  
Ingestion: Do not induce vomiting. Seek medical attention.  
Inhalation: Move to a fresh air environment. Contact a physician if breathing becomes difficult.

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### **SECTION 5. FIREFIGHTING MEASURES**

Flash Point (°C): Not Available  
Explosion Limits: Not Available  
Auto Ignition  
Temperature (°C):  
Not Available  
Extinguishing Media: Carbon dioxide, dry chemical powder, alcohol-resistant foam, or water spray  
Protective Equipment: Wear self-contained respirator and fully protective impervious suit.  
Specific Hazards: May emit hazardous fumes under fire conditions.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Wear a self-contained breathing apparatus, rubber boots and gloves, and disposable coveralls. Dispose of coveralls after use. Remove from ignition sources if safe to do so. Follow emergency response plan and contact proper authorities if needed.

Keep unprotected persons away.

Environmental Protection: Keep spills out of sewers and bodies of water. Dike and contain the spill with inert material. Absorb on sand, vermiculite or diatomite.

Transfer material to a container for disposal or recovery. Ventilate area and wash spill site after material pickup is complete.

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## SECTION 7. HANDLING AND STORAGE

Handling and Storage: Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care. Keep ignition sources away.

Store in a tightly closed container in a dry, well-ventilated place.

Sensitivities:

Storage Temperature (°C):

Not Available

15 to 30

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use product in a well ventilated area or under a fume hood. Use proper lab equipment while handling this product. Keep away from incompatible materials for possible risk of hazardous reaction.

Eye Protection: Wear appropriate protective eyeglass or chemical safety goggles. Make sure that there is an eyewash station in your vicinity.

Skin Protection: Wear impervious gloves and protective clothing.

Respiratory Protection: Use a NIOSH approved respirator when exposure limits are exceeded or if irritation or other symptoms are experienced.

Exposure Limits: Country Source Type Value

USA ACGIH TWA Not Available

USA OSHA STEL Not Available

USA OSHA PEL Not Available

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark red to black powder

Odor: Not Available

Odor Threshold: Not Available

Flash Point (°C): Not Available

Auto Ignition

Temperature (°C): Not Available

UEL % by Volume: Not Available

LEL % by Volume: Not Available

Melting Point (°C): Not Available

Boiling Point (°C): Not Available

Evaporation Rate: Not Available

pH Value: Not Available

Density (g/cm<sup>3</sup>): Not Available

Refractive Index (n<sub>20</sub><sup>D</sup>): Not Available

Viscosity: Not Available

Solubility in Water: Not Available

Solubility in Other: Not Available

Vapor Pressure (mmHg): Not Available

Vapor Density (Air=1): Not Available

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## SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.

Incompatibility: Strong oxidizing agents

Reactivity: Product may react with incompatible materials to release other hazardous substances.

Conditions to Avoid: Heat, flame, sparks, other ignition sources.

Hazardous

Decomposition Products:

Palladium oxides

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## SECTION 11. TOXICOLOGICAL INFORMATION

RTECS Reference:

Target Organs: Not Available

Not Available

Toxicity Data: Not Available

National Toxicology Program (NTP) listed:

Not Available

Carcinogenicity:

International Agency for Research on Cancer (IARC) listed:

Not Available

Potential Symptoms: Not Available

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## SECTION 12. ECOLOGICAL INFORMATION

Toxicity: Not Available

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## SECTION 13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service. Dispose in a manner consistent with federal, state and local environmental regulations.

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## SECTION 14. TRANSPORT INFORMATION

DOT: Not Regulated  
IATA: Not Regulated  
IMDG: Not Regulated

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## SECTION 15. REGULATORY INFORMATION

United States  
Toxic Substance Control Act (TSCA) listed: Yes  
Superfund Amendments and Reauthorization Act (SARA 302) listed: No  
Superfund Amendments and Reauthorization Act (SARA 311/312) listed: No  
Superfund Amendments and Reauthorization Act (SARA 313) listed: No  
European Union  
European Inventory of Existing Chemical Substances (EINECS): 234-836-4  
Canada  
Canadian Non-Domestic Substances List (NDSL) listed: Yes  
Canadian Domestic Substances List (DSL) listed: No

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## 16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.