



Palladox

Safety Data Sheet

according to US HazCom 2012
Issue date: 27 October 2023

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Trade name : Palladox
Product code : AN3146

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Laboratory use

1.3. Supplier

Advanced Instruments LLC
2 Technology Way
Norwood, Massachusetts 02062
1 (781) 320-9000
info@aicompanies.com

1.4. Emergency telephone number

Emergency number : 1 (877) 740-5015

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : The catalytic properties of this product may promote the oxidation and combustion of organic materials. Catalyst may be self-heating in contacted with air after contact previously with H₂ or organic compounds.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of HazCom 2012

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Obtain medical attention if breathing difficulty persists.

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First-aid measures after skin contact	: Wash with water and soap as a precaution. Seek medical attention if ill effect or irritation develops.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Seek medical attention if ill effect or irritation develops.
First-aid measures after ingestion	: Rinse mouth out with water. Do not induce vomiting. If you feel unwell, seek medical advice.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after eye contact	: Dust may cause mechanical irritation.
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4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: None known.

5.2. Specific hazards arising from the chemical

Fire hazard	: The product is not flammable. Thermal decomposition may produce : Palladium (Pd) /. Aluminum oxides. The catalytic properties of this product may promote the oxidation and combustion of organic materials.
Explosion hazard	: No hazard identified.
Hazardous decomposition products in case of fire	: Thermal decomposition can lead to the release of irritating gases and vapors.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire with normal precautions from a reasonable distance.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid raising powdered materials into airborne dust. Avoid contact with eyes.
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6.1.1. For non-emergency personnel

Protective equipment	: If dust are formed : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: No additional risk management measures required.

6.1.2. For emergency responders

Protective equipment	: If dust are formed : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: No additional risk management measures required.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Contain and collect as any solid. Avoid creating or spreading dust.
Methods for cleaning up	: Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. Avoid raising powdered materials into airborne dust.
Other information	: Dispose in a safe manner in accordance with local/national regulations.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13 : "Disposal considerations".

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Catalyst may be self-heating in contacted with air after contact previously with H₂ or organic compounds.
- Precautions for safe handling : No special handling advices are necessary.
- Hygiene measures : Use good personal hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in cool, dry conditions in well sealed receptacles. Store in a well-ventilated place. Keep cool. Keep/Store away from Organic materials, Flammable materials.
- Incompatible materials : Combustible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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No additional information available

Aluminum oxide (Al₂O₃) (1344-28-1)

USA - OSHA - Occupational Exposure Limits

Local name	alpha-Alumina
OSHA PEL (TWA) [1]	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

- Appropriate engineering controls : Good standard of general ventilation.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

In case of repeated or prolonged exposure : Wear suitable gloves resistant to chemical penetration. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer

Eye protection:

If there is a risk of eye contact: Safety glasses with side shields

Respiratory protection:

Wear suitable respiratory equipment in case of insufficient ventilation. Respiratory protective device with a particle filter. P2

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Pellet.
- Color : Light gray
- Odor : Odorless
- Odor threshold : No data available

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pH	: No data available
Melting point	: > 2000 °C (3632 °F)
Freezing point	: > 2000 °C (3632 °F)
Boiling point	: Not applicable
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 1 kg/l
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

The catalytic properties of this product may promote the oxidation and combustion of organic materials. Catalyst may be self-heating in contacted with air after contact previously with H₂ or organic compounds.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Combustible materials.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition may produce : Palladium (Pd). Aluminum oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitization	: Not classified (Based on available data, the classification criteria are not met)

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Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Viscosity, kinematic	: No data available
Symptoms/effects after eye contact	: Dust may cause mechanical irritation.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This material has not been tested for environmental effects.

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of in accordance with relevant local regulations.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable

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DOT	TDG	IMDG	IATA
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Aluminum oxide (Al ₂ O ₃)	CAS-No. 1344-28-1	< 100%
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15.2. International regulations

Palladium (7440-05-3)

Listed on the NCI (Vietnam - National Chemical Inventory)

Listed on TECI (Thailand Existing Chemicals Inventory)

Aluminum oxide (Al₂O₃) (1344-28-1)

Listed on the NCI (Vietnam - National Chemical Inventory)

Listed on TECI (Thailand Existing Chemicals Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Aluminum oxide (Al ₂ O ₃)(1344-28-1)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - Minnesota - Hazardous Substance List; U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

SECTION 16: Other information

according to US HazCom 2012

Revision date : 23 June 2023

Other information : None.

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.