

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

Product name : Palladium

### 1.2 Details of the supplier of the safety data sheet

Company : ASAHI METALFINE, Inc.

Address : Sapia Tower 11F 1-7-12 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

Telephone : +81-3-6270-1826

FAX : +81-3-6270-1813

### 1.3 Emergency telephone number

Telephone : +81-297-20-9032

## 2. HAZARDS IDENTIFICATION

GHS classification and label element of the product

### 2.1 Classification of the substance or mixture

#### HEALTH HAZARDS

Not applicable to GHS classification criteria

### 2.2 Label elements

Not applicable

#### HAZARD STATEMENTS

Not applicable to GHS classification criteria

#### PRECAUTIONARY STATEMENTS

##### Prevention

Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

##### Response

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a doctor.

Call a doctor if you feel unwell.

## 3. COMPOSITION/INFORMATION IN INGREDIENTS

### 3.1 Substances

Formula : Pd

CAS-No : 7440-05-3

Content :  $\geq 99.95\%$

## **4. FIRST AID MEASURES**

### **4.1 Description of first-aid measures**

#### **IF INHALED**

Remove person to fresh air and keep comfortable for breathing.

Get medical attention/advice if you feel unwell.

#### **IF ON SKIN**

Wash with plenty of water.

If skin irritation or rash occurs: Get medical attention/advice.

Get medical attention/advice if you feel unwell.

#### **IF IN EYES**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. If eye irritation persists: Get medical attention/advice.

#### **IF SWALLOWED**

Rinse your mouth immediately.

Get medical attention/advice if you feel unwell.

## **5. FIRE-FIGHTING MEASURES**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Use extinguishing measure that are appropriate to local circumstances and the surrounding environment.

### **5.2 Specific hazards arising from the substance or mixture**

No specific hazards identified by high temperature decomposition.

Avoid contact of molten palladium with water.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1 Personnel precautions, protective equipment and emergency procedures**

Use proper personal protective equipment as indicated in Section 8.

### **6.2 Environmental precautions**

Avoid release to the environment.

### **6.3 Methods and materials for containment and cleaning up**

Spills/Leaks : Sweep up material and place into a suitable disposal container.

## **7. HANDLING AND STORAGE**

### **7.1 Handling**

#### **Handling precautions**

Avoid inhalation of dust, vapor, mist, or gas.

#### **Safety Measures**

In areas where this product is melted or where dust, fumes or other particles are generated during processing of this product:

Use general or local ventilation.

Wear protective gloves / protective clothing / eye protection / face protection.

**Advice on general occupational hygiene**

Wash hands thoroughly after handling.

Don't eat, drink or smoke when using this product.

**7.2 Storage**

In the lump state, no special requirements.

Keep container tightly closed. Store locked up.

**8. EXPOSURE CONTROLS****8.1 Control parameters**

ACGIH believes that even biologically inert, insoluble, or poorly soluble particles may have adverse effects and recommends that airborne concentrations should be kept below 3 mg/m<sup>3</sup>, respirable particles, and 10 mg/m<sup>3</sup>, inhalable particles, until such time as a TLV is set for a particular substance.

**8.2 Exposure controls****Engineering Controls**

In areas where this product is melted or where dust, fumes or other particles are generated during processing of this product:

Equip with an eyewash facility and a safety shower.

Use adequate general or local ventilation.

**Personal Protective Equipment**

Respiratory protection : Wear appropriate respiratory protection.

Hand protection : Wear appropriate protective gloves.

Eye protection : Wear appropriate safety glasses or chemical safety goggles.

Skin and body protection : Wear appropriate protective clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

• Appearance	Form : solid Color : silver / gray
• Odor	odorless
• Melting Point	1,555°C
• Boiling Point	2,963°C
or initial boiling point and boiling range	
• Flammability	No data available
• Lower and upper explosion limit flammability limit	No data available
• Flash point	No data available
• Auto-ignition temperature	No data available
• Decomposition temperature	No data available
• pH	No data available
• Kinematic viscosity	Not applicable for solids
• Water solubility	Insoluble in water
• Partition coefficient n-octanol/water	No data available

• Vapor pressure	No data available
• Density	12.02g/cm <sup>3</sup>
• Relative Vapor density	No data available
• Particle characteristics	No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity / 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

The fine powder absorbs hydrogen well, and the released hydrogen is highly active.

### 10.4 Conditions to avoid

Avoid contact with incompatible materials.

### 10.5 Incompatible materials

Palladium undergoes a violent reaction with sulfur, selenium, phosphorus and arsenic.

Strong acids, Halogens.

### 10.6 Hazardous decomposition products

No information available

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity** : No data available

**Skin corrosion/irritation** : No data available

**Serious eye damage/ irritation** : No data available

**Respiratory or skin sensitization** : No data available

**Germ cell mutagenicity** : No data available

**Carcinogenicity** : No data available

**Reproductive toxicity** : No data available

**Specific target organ toxicity** (single exposure) : No data available

**Specific target organ toxicity** (repeated exposure) : No data available

**Aspiration hazard** : No data available

## 12. ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity

Hazardous to the aquatic environment - short-term(acute) hazard : No data available

Hazardous to the aquatic environment - long-term(chronic) hazard : No data available

Hazardous to the ozone layer : No data available.

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

**12.4 Mobility in soil**

No data available

**12.5 Other adverse effects**

No data available

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

Dispose of the contents/container to in accordance with local/national regulation.

**14. TRANSPORT INFORMATION**

The product is not regulated under UN regulations.

UN-No: –

Specific precautionary transport measures and conditions : No data available

**15. REGULATORY INFORMATION**

Please note that regulatory requirements may vary depending on your country or region. It is the responsibility of the user to ensure compliance with applicable regulations.

Please consult the appropriate authorities or seek professional advice to ensure compliance with all relevant regulations and requirements in your country or region.

**16. ADDITIONAL INFORAMTION****Reference Book**

- JIS Z 7252(2019) / JIS Z 7253(2019)
- Globally Harmonized System of classification and labelling of chemicals,(6th ed.,2015), UN
- 2021 TLVs and BEIs (ACGIH)
- NITE : National Institute of Technology and Evaluation (JP)
- anzeninfo.mhlw (Ministry of Health,Labour and Welfare) (JP)
- ENCYCLOPAEDIA CHIMICA (JP)

**General Disclaimer**

This information does not guarantee the quality or safety of the product. It provides information on the danger or hazard of the product.

The data and evaluation described in this manual are not always sufficient. All chemical products have unknown hazards, so be careful when handling them.

The precautions are intended for normal handling and should be taken with sufficient safety measures in case of special handling.