

SAFETY DATA SHEET

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

1.1 Product identifier

Product name : Rhodium

1.3 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

1.4 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

Sensitization-Respiratory : Category 1

2.2 Label elements

Pictogram :



Signal word :

Danger

HAZARD STATEMENTS

H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled

PRECAUTIONARY STATEMENTS

Prevention

P261 : Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P284 : [In case of inadequate ventilation] wear respiratory protection.

Response

P304+P340 : IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P342+P311 : If experiencing respiratory symptoms: Call a doctor.

Disposal

P501 : Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION/INFORMATION IN INGREDIENTS

3.1 Substances

Formula : Rh

CAS-No. : 7440-16-6

Content : $\geq 99.9\%$

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 experiencing respiratory symptoms: Call a doctor.

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.

Take off contaminated clothing and wash it before reuse.

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 rhodium 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 breathing 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

Keep container tightly closed. Store locked up.

8. EXPOSURE CONTROLS

8.1 Control parameters

ACGIH TLV

Substance	ACGIH TLV
Rhodium [7440-16-6] , as Rh (1996)	
Metal and Insoluble compounds	TWA : 1mg/m ³
Soluble compounds	TWA : 0.01mg/m ³

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(metal) / gray(sponge, powder)
• Odor	odorless
• Melting Point	1,965°C
• Boiling Point	3,695°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	No data available
• Partition coefficient n-octanol/water	No data available
• Vapor pressure	No data available
• Density	12.41 g/cm ³
• 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

Reacts violently with halogens and halogen compounds, causing fire hazard.

Reacts with strong oxidants.

The fine powder is a strong catalyst and may cause fire or explosion.

10.4 Conditions to avoid

Avoid contact with incompatible materials.

10.5 Incompatible materials

Strong oxidants, Oxygen difluoride, Halogens and halogen compounds, Flammable substance

10.6 Hazardous decomposition products

No information available

11. TOXICOLOGICAL INFORMATION

Acute toxicity : Classification not possible

Skin corrosion/irritation : Classification not possible

Serious eye damage/ irritation : Classification not possible

Sensitization-Respiratory : Category 1

Sensitization-Skin : Classification not possible

Germ cell mutagenicity : Classification not possible

Carcinogenicity : Not classified

Reproductive toxicity : Classification not possible

Specific target organ toxicity (single exposure) : Classification not possible

Specific target organ toxicity (repeated exposure) : Classification not possible

Aspiration hazard : Classification not possible

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Hazardous to the aquatic environment - short-term(acute) hazard : Classification not possible

Hazardous to the aquatic environment - long-term(chronic) hazard : Classification not possible

Hazardous to the ozone layer : Classification not possible

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 INFORMATION**Reference Book**

- JIS Z 7252(2019) / JIS Z 7253(2019) (JIS:Japanese Industrial Standards)
- 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)

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.