

SAFETY DATA SHEET

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

1.1 Product identifier

Product name : Silver

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

Eye damage/irritation	: Category 2B
Skin sensitization	: Category 1
Reproductive toxicity	: Category 1B
Specific target organ toxicity (single exposure)	: Category 1 (Respiratory tract)
Specific target organ toxicity (repeated exposure)	: Category 1 (Eyes, Respiratory tract)

2.2 Label elements

Pictogram :



Signal word : Danger

HAZARD STATEMENTS

- H320 : Causes eye irritation
H317 : May cause an allergic skin reaction
H360 : May damage fertility or the unborn child
H370 : Cause damage to organs (Respiratory tract)
H372 : Cause damage to organs (Eyes, Respiratory tract)

PRECAUTIONARY STATEMENTS

Prevention

- P201 : Obtain special instructions before use.
P202 : Do not handle until all safety precautions have been read and understood.
P260 : Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 : Wash hands thoroughly after handling.
P270 : Do not eat, drink or smoke when using this product.
P272 : Contaminated work clothing should not be allowed out of the workplace.

P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P305+P351+P338 : IF IN EYES: Rinse cautiously with water for several minutes.

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

P337+P313 : If eye irritation persists: Get medical advice/attention.

P302+P352 : IF ON SKIN: Wash with plenty of water.

P332+P313 : If skin irritation or rash occurs : Get medical advice/attention.

P362+P364 : Take off contaminated clothing and wash it before reuse.

P308+P311 : If exposed or concerned : Call a doctor.

P314 : Get medical advice/attention if you feel unwell.

Storage

P405 : Store locked up.

Disposal

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

3. COMPOSITION/INFORMATION IN INGREDIENTS

3.1 Substances

Formula	: Ag
CAS-No.	: 7440-22-4
Content	: ≥ 99.99 %

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 advice/attention.

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 silver with water.

6. ACCIDENTAL RELEASE MEASURES**6.1 Personnel precautions, protective equipment and emergency procedures**

Keep the area ventilated until collection.

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. Avoid contact with skin and eyes.

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

Store locked up.

8. EXPOSURE CONTROLS**8.1 Control parameters**

ACGIH TLV

Substance	ACGIH TLV
Silver [7440-22-4] , and compounds (1992)	
Metal, dust and fume	TWA : 0.1mg/m ³
Soluble compounds, as Ag	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. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

• Appearance	Form : Solid Color : Silver
• Odor	odorless
• Melting Point	962°C
• Boiling Point	2,212°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	10.5g/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

Turns black when exposed to ozone, hydrogen sulfide or sulfur.

Form shock-sensitive compounds with acetylene.

Fine powder may explode when in contact with concentrated hydrogen peroxide solution.

(Violently decomposes releasing oxygen gas.)

When dry, contact with ammonia may form explosive compounds.

10.4 Conditions to avoid

Contact with incompatible materials

10.5 Incompatible materials

Strong acids, strong bases, strong oxidizers

10.6 Hazardous decomposition products

No information available

11. TOXICOLOGICAL INFORMATION

Acute toxicity (Oral) : Not classified

Acute toxicity (Dermal) : Not classified

Acute toxicity (Gases) : Classification not possible

Acute toxicity (Vapours) : Classification not possible

Acute toxicity (Dusts and Mists) : Classification not possible

Skin corrosion/irritation : Not classified

Serious eye damage/ irritation : Category 2B

Respiratory or skin sensitization

Sensitization-Respiratory : Not classified

Sensitization-Skin : Category 1

Germ cell mutagenicity : Classification not possible

Carcinogenicity : Carcinogenicity : Classification not possible

Reproductive toxicity : Category 1B

Specific target organ toxicity (single exposure) : Category 1 (Respiratory tract)

Specific target organ toxicity (repeated exposure) : Category 1 (Respiratory tract, Eyes)

Aspiration hazard : No information available

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.