<u>GHS Safety Data Sheet</u>

SDS No. : AGE01GAEG

Date Issued : 2014/02/27 Last updated : 2020/05/27

Section 1. Identification of the substance or mixture and of the supplier Product Information

Product name: Ag Silver

Product number:	Purity	Form	Size or Shape
AGE01GB	99.9%(3N)up	grains, shot-type	ca.1~3 μm
AGE02GB	99.99%(4N)	grains, shot-type	ca.1~3 µm
AGE07GB	4N	grains	ca.3 µm
AGE05GB	99.999%(5N)	grains, shot-type	ca.0.5~1 µm
AGE03GB	5N	grains, shot-type	ca.1~3 µm
AGE01WB	3Nup	wire	φ1 (mm)
AGE02WB	3Nup	wire	$\phi 0.5 \text{ (mm)}$
_	4N, others	grains	Various sizes
_	4N, others	wire	Various sizes

Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd. 1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284 Phone: +81-49-284-1511 Fax: +81-49-284-1351

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Recommended uses and restrictions on use: For research purposes

Section 2. Hazards identification GHS Classification

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Health Hazards	Environmental Hazards	Physical Hazards	
Serious eye damage/eye irritation: Category 2B Skin sensitization : Category 1 Specific target organ toxicity, single exposure : Category 1 Specific target organ toxicity, repeated exposure : Category 1	No data available	Flammable solids : Not classified Pyrophoric solids : Not classified Self-heating substances and mixtures : Not classified Substances and mixtures which, in contact with water, emit flammable gases : Not classified Corrosive to metals : Not classified	
GHS Label: C. W	<u> </u>		



Pictograms or symbols:

High Purity Materials

Warning word: DANGER	
Hazard information	Description of precaution
Causes eye irritation May cause an allergy skin reaction Causes damage to organs (respiratory system) Causes damage to organs (eye, respiratory organs; Inhalation) through prolonged or repeated exposure	 Wear protective gloves/protective clothing/eye protection/respiratory protection/face protection during handling. Avoid breathing dust/mist/gas/fume/vapors/spray. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling. Take off the contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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IF ON SKIN: Remove immediately all contaminated clothing and rinse skin with water/shower. Then wash skin with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell. Store locked up. Dispose of contents/ container in accordance with local/national regulations.

Section 3. Composition / information on ingredients

Chemical or common name:	Silver
Chemical formula:	Ag
Single Substance or Compound:	Single substance
Composition:	100%
CAS #:	7440-22-4
RTECS#:	VW3500000
TSCA inventory :	listed
EINECS:	2311313

Section 4. First aid measures

Eye contact:	Promptly wash eyes with plenty of water while lifting the eye lids.
	Continue to rinse for at least 15 minutes and get medical attention.
Skin contact:	Promptly flush contaminated skin with soap or mild detergent and water.
	Contact physician if irritation continues.
Inhalation:	Remove the exposed person immediately and provide fresh air.
	Get medical attention.
Ingestion:	Rinse mouth and throat with water. Get medical attention immediately.

Section5. Fire fighting measures

Extinguishing media:	Use media appropriate for surrounding fire.
Fire fighting:	The product is not combustible.
	Self-contained breathing apparatus and full protective clothing should be
	used, if the material is involved in fire.

Section 6. Accidental release measures

Personal Precautions:

Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts.

Environmental hazard precautions:

Shut off leak if without risk.

Prevent flow out to river, etc. so as not to badly affect.

Method for containment and cleaning up:

 $Indoor \ leakage: Ventilate \ as \ much \ as \ possible \ until \ the \ cleaning \ is \ completed.$

Outdoor leakage: Work from the windward and evacuate the leeward crowd.

- Gather up, pack in closed container as much as possible.
- Carefully collect remnant and move to a safe place.

Section 7. Handling and storage

Precautions to be taken in handling:

Safe handling: Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen.

Avoid prolonged or repeated exposure.

Precautions to be taken in storage:

General precautions: Store the material in a sealed container.

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Store in a cool, dry, well ventilated and dark place away from incompatible materials.

Section 8. Expos	sure controls / personal protection
Exposure guideline:	ACGIH (2019) : TLV-TWA 0.1 mg/m ³
	OSHA (2006) \therefore PEL-TWA 0.01 mg/m ³
Facility measures:	Local ventilation of closed work room or total proper ventilation to prevent inhalation.
Protective ware:	Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, protective gloves etc.
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Section 9. Physical and chemical properties

Color and Form:	Silver white solid, odorless
Chemical formula:	Ag
Formula weight:	107.9
Melting point:	951.9 °C
Boiling point:	2212 °C
Specific gravity:	10.5 g/cm^3
Solubility:	Insoluble; water, hydrochloric acid
	Dissoluble; nitric acid, hot sulfuric acid
Flammability:	Non-combustible substance
Oxidation:	None

Section10. Stability and reactivity

Stability: Stable in closed container under room temperature. Reactvity

Incompatibility: Strong acids, strong bases, oxalates, tartaric acid.

Section11. Toxicological information

Acute toxicity(Oral):	GHS: Not classified; Falls below the lowest level. Oral rat LD50 > 5000 mg/kg (HSDB (2003))
Acute toxicity(Dermal):	GHS: Not classified; Falls below the lowest level. Dermal rat LD50 > 2000 mg/kg (HSDB (2003))
Skin corrosive / irritation:	GHS: Not classified ; Falls below the lowest level.
Serious eye damage / irritation:	GHS : Category 2B ; Causes eye irritation
Respiratory sensitization:	GHS : No data available
Skin sensitization:	GHS : Category 1 ; May cause an allergy skin reaction.
Germ cell mutagenicity:	GHS : No data available
Carcinogenicity:	GHS : No data available
Reproductive toxicity:	GHS : No data available
Specific target organ toxicity	
-single exposure:	GHS : Category 1; Cause damage to organs (respiratory system).
-repeated exposure:	GHS: Category 1;
	Cause damage to organs (eye, respiratory organs; inhalation) through prolonged or repeated exposure.
Aspiration hazard:	GHS : No data available

Section12. Ecological information

Ecotoxicity:

Hazardous to the aquatic environment

-acute toxicity: GHS : No data available -chronic toxicity: GHS : No data available

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GHS : No data available No Freon or Halon
No data available

Section13. Disposal considerations

Disposal method: User of the product should contract with the local government or licensed 'Industrial Waste Haulers' for disposal of waste.

Section 14. Transport information

UN classification:	Not hazardous
UN number:	None
HS code:	7106.92
Marine pollution:	None
Precautions:	Container should be transported in a secure position, in a well-ventilated vehicle.

Section 15. Regulatory information

TSCA inventory: Listed. Please refer to any other local / national measures that may be relevant.

Section 16. Other information

This SDS is for provision of information, and it does not represent a guarantee the properties or safeties of the product.

The information herein is based on the references we could obtained and the present state of our knowledge, however, this SDS does not always cover all information about the product. Some new information or amendments may be added afterwards.

Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used. The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.

