

**Safety data sheet**  
**According to Regulation n. 1907/2006 and Regulation 878/2020**  
**AG POWDER**



Revision n. 5 – 25.09.2025

Replaces revision n. 4 – 10.10.2024

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

**1.1 Product identifier**

Chemical name	Silver
Product code	28
C.A.S. Registry Number	7440-22-4
INDEX number	Not available
EINECS number	231-131-3
Chemical formula	Ag

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Recommended uses: Industrial use. Use in electroplating processes Carbon-, electro-

medicine- and automotive technology

Uses advised against: none in particular

**1.3 Details of the supplier of the safety data sheet**

<b>Name</b>	FAGGI ENRICO S.P.A.
<b>Address</b>	Via Majorana, 101/103 50019 Sesto Fiorentino FI
<b>Telephone number</b>	055311861
<b>Fax number</b>	055311791
<b>Competent person responsible for the safety data sheet</b>	lorenzo.magaldi@faggi.it

<b>1.4 Emergency telephone number</b>	111 - Medical helpline operating in England, in Scotland (NHS 24) and in Wales (NHS Direct Wales).
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<b>1.5 Registration number</b>	01-2119555669-21-XXXX
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**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the mixture according to Regulation (EC) n. 1272/2008**

<b>Hazard class</b>	<b>Category codes</b>	<b>Hazards indications</b>
Aquatic acute	1	H400
Aquatic chronic	1	H410

**2.2 Label elements:**

**Pictograms**



<b>Signal word</b>	<b>WARNING</b>
<b>Hazard statement</b>	H400

H410	Very toxic to aquatic life Very toxic to aquatic life with long lasting effects
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<b>Precautionary advise</b>	P273	Avoid release to the environment
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<b>2.3 Other hazards</b>	It does NOT contain PBT / vPvB substances according to Regulation (EC) 1907/2006, annex XIII It does NOT contain substances that interfere with the endocrine system in accordance with Regulation (EC) 1907/2006 art.59 paragraph 1 and in accordance with the criteria established in Regulation (EU) 2017/2100 and Regulation (EU) 2018/605.
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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substance:** Silver

CAS number	7440-22-4
EC number	231-131-3
INDEX number	Not available
ATE	ATE (inhalation) (rat): > 5.16 mg/l according to OECD Guideline 436 ATE (ingestion) (rat): 125 mg/kg bw according to OECD Guideline 408
M factor (acute)	10
M factor (chronic)	10

**4. FIRST AID MEASURES**

**4.1 Description of first aid measures**

Inhalation	Move the person to a well-ventilated area and position them so that breathing is easy. If the person is unconscious, keep them in a stable side position during transport.
Ingestion	Call a doctor or poison control center immediately if they feel unwell.
Contact with skin	Immediately rinse thoroughly with water.
Contact with eyes	To be safe, rinse with plenty of running water for at least 15 minutes, holding the eyelids open (remove contact lenses if easily possible).

**Recommendations:**

- Need to see a doctor immediately NO
- Possibility of delayed effects following exposure NO
- Move the exposed individual from the place of exposure to the open air YES
- Remove the clothing and shoes of the exposed individual NO
- How to handle contaminated clothing Use gloves
- For those providing first aid, wear PPE YES

**4.2 Most important symptoms and effects, both acute and delayed**

None

**4.3 Indication of any immediate medical attention and special treatment needed**

If unwell, consult a doctor.

**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

Suitable extinguishing media	Water spray. Dry powder. Foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

**5.2 Special hazards arising from the substance or mixture**

In case of fire, toxic fumes may be released.

**5.3 Advice for firefighters**

Normal firefighting clothing, such as open-circuit compressed air breathing apparatus (EN137), flame-retardant overalls (EN469), flame-retardant gloves (EN659) and firefighter's boots (HOA29 or A30)

**6. ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**6.1.1. For non-emergency personnel**

Move away from the contaminated area

**6.1.2. For emergency responders**

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Wear :

Gloves for chemical risks compliant with EN420 EN374 Standards

Complete clothing compliant with the UNI EN 13034: 2006 standard

Semi-face masks with P2 filters conforming to EN14387: 2004 + A1: 2008

**6.2 Environmental precautions**

Prevent infiltration into the sewer, groundwater and surface water

**6.3 Methods and material for containment and cleaning up**

**6.3.1. Recommendations on how to contain a spill**

Avoid dust formation by moistening the area with water and collecting with shovels or brooms. Collect the material with shovels or similar.

**6.3.2. Advice in order to clean-up a spill**

Flush the contaminated area with water. Prevent leakage into sewers, groundwater, and surface water.

**6.3.3 Other information**

None

**6.4 Reference to other sections**

None

**7. HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

**7.1.1. Recommendations in order to manipulate the substance or the mixture in a safe manner, such as containment measures and prevention of fire and aerosol and powders formation**

Use under extractor hood while wearing the PPE provided.

**7.1.2. General recommendation on work hygiene**

Do not eat, drink and smoke in work areas. Wash your hands after use. Remove contaminated clothing and protective equipment before entering eating areas

**7.2. Conditions Safe storage, including any incompatibilities**

**7.2.1. Risk management associated with explosive atmospheres, corrosive conditions, flammability hazards, incompatible substances or mixtures, evaporative conditions, potential ignition sources**

No particular recommendations

**7.2.2. Containment of the effects of weather conditions, pressure, temperature, sunlight, humidity and vibrations**

Keep away from light

**7.2.3. Conditions for keeping substances / mixtures intact**

Keep containers as closed as possible

**7.2.4. Provisions relating to ventilation, specific design of storage rooms or containers, quantitative limits in storage conditions, compatibility of packaging**

Store in a cool, ventilated area

**7.3. Specific end use(s)**

Industrial use. Use in electroplating processes Carbon-, electro- medicine- and automotive technology

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**DNEL**

Based on the ECHA RAC-35 assessment of argyria as “non-adverse”, recent studies and the current scientific consensus on argyria, it was concluded that “no adverse effects have been identified” for metallic silver in powdered and massive form and therefore no DNEL needed to be derived.

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**PNEC**

Freshwater: 0.04 µg/L  
Marine water: 0.86 µg/L  
Sewer treatment plant: 0.025 mg/L  
Sediment (freshwater): 438.13 mg/kg sediment dry weight  
Sediment (marine water): 438.13 mg/kg sediment dry weight  
Soil: 1.41 mg/kg soil dry weight

**8.2. Exposure controls**

**8.2.1. Appropriate engineering controls**

Periodically check the flow rate of the extractor hood.

**8.2.2. Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Splash goggles compliant with Directive 89/686 / EEC and standard EN166: 2001
<b>Skin protection (hands)</b>	Chemical gloves compliant with EN420 and EN374 standards. Glove material: latex, nitrile rubber. Material thickness: no specification required. Breakthrough time: no specification required.
<b>Skin protection (body)</b>	Complete clothing compliant with the UNI EN 13034: 2006 standard
<b>Respiratory protection</b>	Half-face mask with P2 filters in case of insufficient ventilation
<b>Thermal hazards</b>	The substance does not present thermal hazards

**8.2.3. Environmental exposure controls**

Maintain suction in all environments using localized collection systems and ambient air exchange. Convey the aspirated volumes to an abatement system and then into the atmosphere. Do not use recirculating air suction systems. Avoid any spillage into the environment.

**9.**

**PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

Physical state	Solid dust
Color	Metallic grey
Odor	Odourless
Melting point / freezing point	961 ° C
Boiling point or initial boiling point and boiling range	2187 °C
Flammability	Not flammable
Lower and upper explosive limits	Not explosive
Flash point	Not flammable
Self-ignition temperature	Not flammable
Decomposition temperature	Not applicable
pH	Not applicable
Kinematic viscosity	Not applicable
Solubility	0.03 µg/l at 20 °C
Partition coefficient n-octanol / water (logarithmic value)	Not applicable
Vapor pressure	Negligible at 20 ° C
Density and / or relative density	10.5 g/cm³ at 20 °C
Relative vapor density	Nt applicable

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	Characteristics of the particles	D10 = 2 µm D50 = 11 µm D90 = 25.4 µm
<b>9.2.</b>	<b>Other information</b>	None
<b>10.</b>	<b>STABILITY AND REACTIVITY</b>	
<b>10.1</b>	<b>Reactivity</b>	No reactivity under normal conditions of use, transport and storage
<b>10.2</b>	<b>Chemical stability</b>	The product is stable under normal working conditions
<b>10.3</b>	<b>Possibility of hazardous reactions</b>	No relevant information
<b>10.4</b>	<b>Conditions to avoid</b>	strong heating
<b>10.5</b>	<b>Incompatible materials</b>	Nessuno
<b>10.6</b>	<b>Hazardous decomposition products</b>	The product does not decompose under normal conditions of use.
<b>11.</b>	<b>TOXICOLOGICAL INFORMATION</b>	
<b>11.1</b>	<b>Information on hazard classes as defined in Regulation (EC) No 1272/2008</b>	
	<b>Acute toxicity</b>	Based on available data, the classification criteria are not met. ATE (inhalation) (rat): > 5.16 mg/l according to OECD Guideline 436 ATE (ingestion) (rat): 125 mg/kg bw according to OECD Guideline 408
	<b>Skin corrosion / irritation</b>	Based on available data, the classification criteria are not met
	<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met
	<b>Respiratory or skin sensitization</b>	Based on available data, the classification criteria are not met
	<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met
	<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met
	<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met
	<b>STOT – single exposure</b>	Based on available data, the classification criteria are not met
	<b>STOT – repeated exposure</b>	Based on available data, the classification criteria are not met
<b>11.2</b>	<b>Information on other hazards</b>	
	None	
<b>12.</b>	<b>ECOLOGICAL INFORMATION</b>	
<b>12.1</b>	<b>Toxicity</b>	<b>PNEC</b> Freshwater: 0.04 µg/L Marine water: 0.86 µg/L Sewer treatment plant: 0.025 mg/L

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		Sediment (freshwater): 438.13 mg/kg sediment dry weight Sediment (marine water): 438.13 mg/kg sediment dry weight Soil: 1.41 mg/kg soil dry weight LC50 (fish): 4.7 µg/l
<b>12.2</b>	<b>Persistence and degradability</b>	Not applicable
<b>12.3</b>	<b>Bioaccumulative potential</b>	Not applicable
<b>12.4</b>	<b>Mobility in soil</b>	No data available
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>	Not applicable
<b>12.6</b>	<b>Endocrine disrupting properties</b>	No known effects
<b>12.7</b>	<b>Other adverse effects</b>	None
<b>13.</b>	<b>DISPOSAL CONSIDERATIONS</b>	
<b>13.1.</b>	<b>Waste treatment methods</b>	The substance and its packaging must be disposed of as hazardous waste by authorized companies.
<b>14.</b>	<b>TRANSPORT INFORMATION</b>	
<b>14.1</b>	<b>UN number or ID number</b>	UN3077
<b>14.2</b>	<b>Official UN shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver)
<b>14.3</b>	<b>Transport hazard class(es)</b>	ADR/RID/ADN/IMDG/ICAO-IATA: Class: 9 ADR/RID/ADN/IMDG/ICAO-IATA: Label: 9 + mark dangerous for environment ADR: Tunnel restriction code (-) IMDG - EmS: F-A, S-F
<b>14.4</b>	<b>Packing group</b>	III
<b>14.5</b>	<b>Dangers for the environment</b>	ADR/RID/ADN/ICAO-IATA: Dangerous for the environment IMDG: Marine Contaminant: yes
<b>14.6</b>	<b>Special precautions for user</b>	Transport must be carried out by vehicles authorized for the transport of dangerous goods according to the provisions of the current edition of the A.D.R. Agreement. and the applicable national provisions. Transport must be carried out in the original packaging and, in any case, in packaging which is made of materials which cannot be attacked by the contents, and which are not likely to generate dangerous reactions. Those responsible for loading and unloading dangerous goods must have received appropriate training on the risks presented by the preparation and on any procedures to be adopted in the event of emergency situations.
<b>14.7</b>	<b>Maritime transport in bulk according to IMO instruments</b>	Bulk transport is not foreseen
<b>15.</b>	<b>REGULATORY INFORMATION</b>	
<b>15.1</b>	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	<b>Applicability</b>
	Reg. (EC) 1907/2006 / EC Reach	YES
	Reg. (EC) 1272/2008 CLP and subsequent changes and additions	YES
	Reg. (CE) 2037/2000 "Substances that deplete the ozone layer"	NO
	Reg. (EC) 850/2004 "Persistent organic pollutants"	NO
	Reg. (EC) 689/2008 "export and import of dangerous chemicals"	NO

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	Substance listed in Annex I of Dir. 2012/18 / EU so-called Seveso Legislative Decree 81/2008 Consolidated Law on health and safety at work	YES
	Directive 2014/103 / EU "Adr"	YES
	<b>Reg. (CE) 1907/2006/CE Reach art. 59 – Candidate List of Substances of Very High Concern (SVHC)</b>	NO
	<b>Reg. (CE) 1907/2006/CE Reach - Annex XIV – Authorisation List</b>	NO
	<b>Reg. (CE) 1907/2006/CE Reach - Annex XVII – Restriction List</b> <a href="https://echa.europa.eu/it/substances-restricted-under-reach">https://echa.europa.eu/it/substances-restricted-under-reach</a>	No limited use (check link)
	<b>Water hazard class according to German regulation WGK (Wassergefährdungsklasse)</b>	WGK: 3
<b>15.2</b>	<b>Chemical safety assessment</b> A chemical safety assessment was carried out	
<b>16.</b>	<b>OTHER INFORMATION</b> <b>Changes compared to the previous edition</b> Changes to sections: 3-4-5-6-8-9-11-14-15-16 <b>Acronym and abbreviation legend</b> ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways GHS: Globally Harmonized System of Classification and Labeling of Substances EINECS: European Inventory of Chemical Substances CAS: Chemical Abstract Service STA: Acute Toxicity Estimate PBT: Persistent, Bioaccumulative and Toxic. vPvB: (very persistent and very bioaccumulative). Very persistent and very bioaccumulative LD: lethal dose PNEC: predicted no effect concentration DNEL: derived no effect level TLV (ceiling value): threshold limit value STEL: short-term exposure limit EU-OEL: European occupational exposure limit TWA: time-weighted average EC: effective concentration NOAEL: no observed adverse effect level LC: lethal concentration NOEC: no observed effect concentration LOEC: lowest observed effect concentration Bw: body weight Koc: organic carbon-water partition coefficient <b>Main references and data sources</b> ECHA's data bank on registered substances and soon to be registered substances: <a href="https://chem.echa.europa.eu/">https://chem.echa.europa.eu/</a> <b>Adequate training for workers in order to ensure the protection of human health and the environment</b> Training on Chemical Risk pursuant to Legislative Decree 81/08 Title IX dangerous substances	

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PPE training