

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020
Ag 999.9% in grains - wire - anodes



Revision 8 – 30.04.2026

Replaces revision 7 – 15.02.2022

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

1.1 Product identifier

Commercial name	Silver
Product type	Product code
Anodes	04
Selected size grains	171
Grains	21
Wire	62
Wire D. 1.8	63
Wire D. 3.5	64
C.A.S Registry Number	7440-22-4
EC number	231-131-3
Index	047-004-00-9
Raw Formula	Ag
Registration number	01-2119555669-21-XXXX

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

Intended uses	Goldsmith, silversmith, pharmaceutical, glass production, and photographic. Industrial use.
Advised against uses	None in particular

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number 111 - Medical helpline operating in England, in Scotland (NHS 24) and in Wales (NHS Direct Wales)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to Regulation (EC) No. 1272/2008

Hazard classes	Category codes	Hazard statements
Reproductive toxicity	2	H361f
STOT - RE	2	H373

2.2 Label elements

Pictograms



Signal words

WARNING

Hazard statements

H361f

Suspected of damaging fertility or the unborn child

H373

May cause damage to organs through prolonged or repeated exposure (nervous system)

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2.3	Other hazards	P201 P280 P308+P313	Obtain special instructions before use. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection IF exposed or concerned: Get medical advice/attention
			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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Silver > 99.9 %	
CAS number	77440-22-4
EC number	231-131-3
INDEX	047-004-00-9
ATE	LD50 (Dermal) (rat): > 2000 mg/kg OECD 402 LD50 (Oral): > 2000 mg/kg OECD 401 (Allen 1993) LC50 (Inhalation mists/dusts): > 5.16 mg/l/4h OECD 436 (Haferkorn 2012)

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Bring to a well ventilated area, in case of problems consult a doctor.
Ingestion	Do not induce vomiting unless specifically directed by a doctor. Do not administer anything orally to an unconscious person. Seek medical attention immediately.
Skin contact	Generally the product is not irritating to the skin.
Eye contact	Wash with running water for several minutes holding the eyelids wide open and consult your doctor. Contact a physician

Recommendations :

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

4.2 Most important symptoms and effects, both acute and delayed

To date, there are no known incidents of health damage attributable to the metal in massive form, however, it should be noted that a mandatory harmonized classification for metallic silver

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(in all its forms!) has been in force in the EU (+EEA) since 1 May 2026 (22nd ATO to CLP). This specifies that metallic silver (in all its forms) requires a minimum classification as REPR2 (H361f).

4.3 Indication of any immediate medical attention and special treatment needed

Consult a physician immediately. It is of the utmost importance to clean the entire contaminated area of the body, including the scalp and nails.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media CO₂, powder or water spray extinguishers. Extinguish large fires with water spray or alcohol-resistant foam.

Unsuitable extinguishing media None

5.2 Special hazards arising from the substance or mixture

In case of fire, silver oxide fumes may form

5.3 Advice for firefighters

Normal fire-fighting clothing, such as self-contained open-circuit compressed air breathing apparatus (EN137), flame retardant suit (EN469), flame retardant gloves (EN659) and firefighter boots (HOA29 or A30)

Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Evacuate surrounding areas

6.1.2. For emergency responders

Standard firefighting clothing, such as open-circuit compressed air breathing apparatus (EN 137), flame-retardant overalls (EN 469), flame-retardant gloves (EN 659), and firefighter boots (HO A29 or A30).

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the competent authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

6.3 Methods and material for containment and cleaning up

6.3.1. Advice in order to contain a spill

None

6.3.2. Advice in order to clean-up a spill

Collect by mechanical means.

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

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Handle the product after consulting all other sections of this safety data sheet. Avoid release of the product into the environment.

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 for 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

Keep product in clearly labeled containers. Keep containers away from any incompatible materials, see section 10.

7.2.2. Control of weather conditions, ambient pressure, temperature, sunlight, humidity and vibration

Store in closed and labeled containers away from sunlight.

7.2.3. Conditions to maintain the integrity of the substance or mixture

Close the containers immediately after use.

7.2.4. Advice regarding the ventilation, specific design for storage rooms or vessels, quantity limits under storage conditions, packaging compatibilities

The storage rooms must be ventilated and closed and free of manholes / sewers

7.3. Specific end use(s)

Industrial use

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

VLEP (ITA): TWA/8h 0.1 mg/m³

EU-OEL: TWA/8h 0.1 mg/m³

DNEL

Workers

Systemic effects from long-term exposure – inhalation: 4.9 mg/m³

Systemic effects from short-term exposure – inhalation: No hazard identified

Local effects from long-term exposure – inhalation: No hazard identified

Local effects from short-term exposure – inhalation: No hazard identified

Systemic effects from long-term exposure – dermal: 4.3 mg/kg body weight per day

Systemic effects from short-term exposure – dermal: No hazard identified

Local effects from long-term exposure – dermal: No hazard identified

Local effects from short-term exposure – dermal: No hazard identified

Eye hazards: No hazard identified

General population

Systemic effects from long-term exposure – inhalation: 1.2 mg/m³

Systemic effects from short-term exposure – inhalation: No hazard identified

Local effects from long-term exposure – inhalation: No hazard identified

Local effects from short-term exposure – inhalation: No hazard identified

Systemic effects from long-term exposure – dermal: 2.2 mg/kg body weight per day

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Systemic effects from short-term exposure – dermal: No hazard identified
Local effects from long-term exposure – dermal: No hazard identified
Local effects from short-term exposure – dermal: No hazard identified
Systemic effects from long-term exposure – oral: 0.43 mg/kg body weight per day
Systemic effects from short-term exposure – oral: No hazard identified
Eye hazards: No hazard identified

PNEC

Freshwater: No hazard identified
Marine water: No hazard identified
Sewage treatment plant: No hazard identified
Sediment (freshwater): No hazard Identified
Sediment (seawater): No identified hazards
Soil: No identified hazards

8.2.

Exposure controls

8.2.1. *Appropriate engineering controls*

Periodically carry out personal environmental sampling and clinical examinations.

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

Eye/face protection Splash goggles compliant with Directive 89/686 / EEC and standard EN166: 2001

Skin protection (hands) Gloves according to EN 374

Glove material:

Nitrile rubber, latex

Thickness 0.40 mm

Breackthrough time > 30 minutes

Skin protection (body) Wear long-sleeved work clothes and Category II professional safety footwear (ref. Regulation 2016/425 and EN ISO 20344). Wash with soap and water after removing protective clothing.

Respiratory protection Not necessary

Thermal hazards None

8.2.3. *Environmental exposure controls*

Keep all environments where silver carbonate is used in suction, using localized collection systems and ambient air exchange. Convey the aspirated volumes to an abatement system and then into the atmosphere. Do not use air recirculation 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

Colour Silvery

Odour Odorless

Melting point/freezing point 961 °C

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Boiling point or initial boiling point and boiling range	2187 °C
Flammability	Not inflammable
Lower and upper explosion limit	Not applicable
Flash point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
pH	Not applicable
Kinematic viscosity	Not applicable
Solubility	Insoluble
Partition coefficient n-octanol/water (log value)	Not applicable
Vapour pressure	Not applicable
Density and/or relative density	10.5 g/cm ³
Relative vapour density	Not applicable
Particle characteristics	Not available

9.2. Other information

None

10. STABILITY AND REACTIVITY

10.1 Reactivity

No relevant information

10.2 Chemical stability

The product is stable if used as directed.

10.3 Possibility of hazardous reactions

Possible formation of explosive compounds when reacting with acetylene

10.4 Conditions to avoid

No other information available

10.5 Incompatible materials

Acetylene, acids, strong oxidants, peroxides, strong bases

10.6 Hazardous decomposition products

No hazardous decomposition products are known

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

LD50 (Dermal) (rat): > 2000 mg/kg OECD 402
 LD50 (Oral): > 2000 mg/kg OECD 401 (Allen 1993)
 LC50 (Inhalation mists/dusts): > 5.16 mg/l/4h OECD 436 (Haferkorn 2012)

Skin corrosion/irritation

Based on available data, the classification criteria are not met

Serious eye damage/irritation

Based on available data, the classification criteria are not met

Respiratory or skin sensitization

Based on available data, the classification criteria are not met

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	Germ cell mutagenicity	Based on available data, the classification criteria are not met
	Carcinogenicity	Based on available data, the classification criteria are not met
	Reproductive toxicity	Suspected of harming fertility
	STOT – single exposure	Based on available data, the classification criteria are not met
	STOT – repeated exposure	May cause organ damage (nervous system)
	Aspiration hazards	Based on available data, the classification criteria are not met
11.2	Information on other hazards	
	None	
12.	ECOLOGICAL INFORMATION	
12.1	Toxicity	Based on available data, the classification criteria are not met
12.2	Persistence and degradability	Not biodegradable
12.3	Bioaccumulative potential	No data available
12.4	Mobility in soil	No data available
12.5	Results of PBT and vPvB assessment	Not PBT nor vPvB
12.6	Endocrine disrupting properties	No known effects
12.7	Other adverse effects	No known effects
13.	DISPOSAL CONSIDERATIONS	
13.1.	Waste treatment methods	
	Classify as special hazardous waste. If possible, allocate both the substance and the packaging to plants authorized for the recovery of precious metal	
14.	TRANSPORT INFORMATION	
14.1	UN number or ID number	Not applicable
14.2	Official UN shipping name	
	ADR/RID/ADN/IMDG/ICAO-IATA	Not applicable
14.3	Transport hazard class	
	ADR/RID/ADN/IMDG/ICAO-IATA: Class	Not applicable
	ADR/RID/ADN/IMDG/ICAO-IATA: Label	Not applicable
	ADR: Tunnel restriction code.	Not applicable
	IMDG - EmS	Not applicable
14.4	Packing group	Not applicable
14.5	Dangers for the environment	
	ADR/RID/ICAO-IATA:	Not applicable
	IMDG: Marine Contaminant:	NO
14.6	Special precautions for users	
	Not applicable	
14.7	Maritime transport in bulk according to IMO instruments	
	Bulk transport is not foreseen	
15.	REGULATORY INFORMATION	

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15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	Applicability
	<i>Reg. (CE) 1907/2006/CE Reach</i>	YES
	<i>Reg. (EC) 1272/2008 CLP and subsequent changes and additions</i>	YES
	<i>Reg. (CE) 2037/2000 "Substances that deplete the ozone layer"</i>	NO
	<i>Reg. (EC) 850/2004 "Persistent organic pollutants"</i>	NO
	<i>Reg. (EC) 689/2008 "export and import of dangerous chemicals"</i>	NO
	<i>Substance listed in Annex I of Dir. 2012/18 / EU so-called Seveso</i>	NO
	<i>Legislative Decree 81/2008 Consolidated Law on health and safety at work</i>	YES
	<i>Directive 2014/103 / EU "Adr"</i>	YES
	<i>Reg. (CE) 1907/2006/CE Reach art. 59 – Candidate List of Substances of Very High Concern (SVHC)</i>	NO
	<i>Reg. (CE) 1907/2006/CE Reach - Annex XIV – Authorisation List</i>	NO
	<i>Reg. (CE) 1907/2006/CE Reach - Annex XVII – Restriction List</i>	Limited use
	https://echa.europa.eu/it/substances-restricted-under-reach	Item 75 (check link)
15.2	Chemical safety assessment A chemical safety assessment was not carried out	
16.	OTHER INFORMATION Changes compared to the previous edition Changes to sections 1-2-3-4-7-8-9-10-11-12-14-16 Acronim and abbreviation legend 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	

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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

MAK: maximum concentration in the workplace

VLEP (Valore Limite di Esposizione Professionale): Occupational Exposure Limit Value

Main references and data sources

ECHA's data bank on registered substances and soon to be registered substances:

<https://chem.echa.europa.eu/>

Adequate training for workers to ensure the protection of human health and the environment

Training on Chemical Risk pursuant to Legislative Decree 81/08 Title IX dangerous substances

PPE training