

Safety data sheet
According to Regulation n. 1907/2006 and Regulation 878/2020
Methanesulfonate Silver



Revision n. V of 22.11.2022
Replaces revision IV of 27.01.2022

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

1.1 Product identifier

Chemical name	Methanesulfonate Silver
Product code	198
C.A.S. Registry Number	2386-52-9
EC Number	219-199-2
INDEX	Not available
Molecular weight	202,97 g/mol
Brute formula	CH ₃ AgO ₃ S

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

Recommended uses	Industrial use
Uses advised against	Check section 15
Catalyst in homogeneous phase	

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).

1.5 Registration number A REACH registration number is not available for this substance as the annual quantity produced or imported is less than one tonne.

2. HAZARDS IDENTIFICATION

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

Hazard class	Category codes	Hazards indications
Met. Corr.	1	H290
Acute tox.(orale) STA 500 mg/kg bw	4	H302
Acute tox. (cutaneo) STA 500 mg/kg bw	4	H312
Skin corr.	1C	H314
Eye Dam.	1	H318
Acute tox (inalazione) STA 500 mg/kg bw	4	H332
STOT SE	3	H335

2.2 Label elements

Pictograms



Signal word

DANGER

Hazard statements

H290
H302

It can be corrosive to metals.
Harmful if swallowed

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Precautionary advice	H314	It causes serious skin burns and serious eye injuries
	H318	Causes serious eye damage.
	H312	Harmful in contact with skin
	H332	Harmful if inhaled
	H335	It can irritate the respiratory tract
	P260	Do not breathe dust / fume / gas / mist / vapors / spray.
	P280	Wear protective gloves / clothing / eye protection / face protection
	P301 + P330 + P331	IF SWALLOWED: rinse mouth. DO NOT induce vomiting
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	P305 + P351 + P338	IN CASE OF CONTACT WITH THE EYES: rinse thoroughly for several minutes. Remove any contact lenses if easy to do. Continue rinsing
P501	Dispose of the product / container in accordance with national regulations	

2.3 Other hazards
 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 Substance: Methanesulfonate Silver
CAS Number 2386-52-9
EC Number 219-199-2
INDEX Not available
ATE 500 mg/kg bw
M Factor (acute) Not applicable
M Facto (chronic) Not applicable

4. FIRST AID MEASURES

4.1 Description of first aid measures
Inhalation Take the person to a very well-ventilated area and for safety consult a doctor. If the person is unconscious, keep him in a stable position on his side during transport.

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Ingestion	Call a doctor immediately. Make victim drink water (two glasses at least).
Contact with skin	Immediately wash with water and rinse thoroughly.
Contact with eyes	Rinse with plenty of running water for at least 15 minutes while keeping the eyelids open (remove contact lenses if it is easy to do so). Consult an ophthalmologist.

Recommendations:

- Need to see a doctor immediately YES
- Possibility of delayed effects following exposure YES
- Move the exposed individual from the place of exposure to the open air YES
- Remove the clothing and shoes of the exposed individual YES
- 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

In case of inhalation or ingestion: sore throat, cough, burning sensation. Shortness of breath, difficulty in breathing. Blue Lips, nails and skin. Vertigo, headache, nausea. Confusional state, convulsions, unconsciousness. Symptoms can be delayed. Abdominal pain, burning sensation. Shock or collapse.

In case of skin contact: pain, redness, burns, blisters.

In case of eye contact: redness, pain. Severe deep burns. Loss of vision

4.3 Indication of any immediate medical attention and special treatment needed

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

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

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

Unsuitable extinguishing media none

5.2 Special hazards arising from the substance or mixture

Avoid breathing fumes. In the event of a fire, the following may develop: carbon monoxide, sulfur oxides, silver oxides.

5.3 Advice for firefighters

Prevent the water used to extinguish the fire from flowing into the sewer, groundwater or surface water.

General information

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)

Equipment

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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Keep away from contaminated area and keep upwind

6.1.2. For emergency responders

Wear:

Gloves for chemical risks compliant with EN420 EN374 Standards

Complete clothing compliant with the UNI EN 13034: 2006 standard

Semi-face masks with ABEK2P3 R filters conforming to EN14387: 2004 + A1: 2008

6.2 Environmental precautions

Prevent infiltration into the sewer, groundwater and surface water. In case of infiltration into bodies of water or sewers or in case of penetration into the ground, notify the competent authorities.

6.3 Methods and material for containment and cleaning up

6.3.1. Advice in order to contain a spill

Collect materials limiting the formation of dust

6.3.2. Advice in order to clean-up a spill

Wash contaminated area with 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

Store in original and labeled packaging. Use under suction. Close the jars immediately after use. Use is permitted only to trained and informed personnel.

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

Store in an area without drains or access to sewers

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

Keep away from moisture and direct light.

7.2.3. Conditions for keeping substances / mixtures intact

Keep in a cool and dry place in hermetically closed containers

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

Store in an area without drains or access to sewers

7.3. Specific end use(s)

Industrial use

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters (related to metallic Silver species)

ECTLV TWA 0,01 mg/m³

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- OEL (IT) TWA 0,01 mg/m³
 DNEL e PNEC : N.D.
- 8.2. Exposure controls**
 Provide for appropriate air intake/exhaust in the workplace and on the operating machine. Provide for the installation of an emergency shower and an eye shower.
- 8.2.1. Appropriate engineering controls**
 Use under a fume hood. Periodically check the range of the hood. Periodically carry out personal environmental samplings 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 with standard EN166: 2001 |
| Skin protection (hands) | Chemical risk gloves compliant with EN420 EN374 standards |
| Skin protection (body) | Complete antacid clothing compliant with the UNI EN 13034: 2006 type 6 standard |
| Respiratory protection | Semi-face mask with P2 filters |
| Thermal hazards | The substance does not present a thermal hazard |
- 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 white or grey / white
Color	white or grey / white
Odor	Odorless
Melting point / freezing point	270 ° C
Boiling point or initial boiling point and boiling range	Not applicable
Flammability	Not inflammable
Lower and upper explosive limits	Not applicable
Flash point	Not applicable
Self-ignition temperature	Not applicable
Decomposition temperature	Ca 370 ° C
pH	1 (10 g / l @ 20 ° C)
Cinematic viscosity	Not applicable
Solubility	Completely soluble in water
Production coefficient n-octanol / water (logarithmic value)	Not applicable
Vapor pressure	Not applicable
Density and / or relative density	1.40 g / cm ³
Relative vapor density	Not applicable

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	Characteristics of the particles	Data not available
9.2.	Other information	
	None	
10.	STABILITY AND REACTIVITY	
10.1	Reactivity	
	Data not available	
10.2	Chemical stability	
	The product is stable when used according to regulations. Possibility of thermal decomposition	
10.3	Possibility of hazardous reactions	
	Reaction with basis	
10.4	Conditions to avoid	
	No information available	
10.5	Incompatible materials	
	No information available	
10.6	Hazardous decomposition products	
	Carbon monoxide, sulfur oxides, silver oxides	
11.	TOXICOLOGICAL INFORMATION	
11.1	Information on hazard classes as defined in Regulation (EC) No 1272/2008	
	Acute toxicity	STA 500 mg/kg bw
	Skin corrosion / irritation	Corrosive for skin
	Serious eye damage/irritation	Corrosive for eyes
	Respiratory or skin sensitization	Based on available data, the classification criteria are not met
	Germ cell mutagenicity	Data not available
	Carcinogenicity	Data not available
	Reproductive toxicity	Data not available
	STOT – single exposure	Irritation of respiratory tract
	STOT – repeated exposure	Skin (argyria)
11.2	Information on other hazards	
	Silver compounds can cause permanent skin discoloration (argyria)	
12.	ECOLOGICAL INFORMATION	
12.1	Toxicity	Data not available
12.2	Persistence and degradability	Not applicable
12.3	Bioaccumulative potential	Not applicable
12.4	Mobility in soil	No data available
12.5	Results of PBT and vPvB assessment	No data available
12.6	Endocrine disrupting properties	No known effects
12.7	Other adverse effects	None known
13.	DISPOSAL CONSIDERATIONS	
13.1.	Waste treatment methods	
	Dispose of both the substance and its packaging as hazardous waste and deliver them to an authorized facility.	
14.	TRANSPORT INFORMATION	

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14.1	UN number or ID number	1759
14.2	UN proper shipping name	Corrosive solid n.o.s. (Ag methanesulfonate)
14.3	Transport hazard class(es)	8
14.4	Packing group	III
14.5	Environmental hazards	no
14.6	Special precautions for user	Approved packaging
14.7	Maritime transport in bulk according to IMO instruments	Not applicable

15. REGULATORY INFORMATION

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	Applicability
	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
	Substance listed in Annex I of Dir. 2012/18 / EU so-called Seveso	NO
	Legislative Decree 81/2008 Consolidated Law on health and safety at work	YES
	Directive 2014/103 / EU "Adr"	YES
	Reg. (CE) 1907/2006/CE Reach art. 59 – Candidate List of Substances of Very High Concern (SVHC)	NO
	Reg. (CE) 1907/2006/CE Reach - Annex XIV – Authorisation List	NO
	Reg. (CE) 1907/2006/CE Reach - Annex XVII – Restriction List	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

Regulatory update

Acronim and abbreviation legend

ADR : Agreement concerning the International Carriage of Dangerous Goods by Road

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstract Service

Main references and data sources

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

<http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

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

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

PPE training