

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 27.09.2018

Version number 3

Revision: 22.08.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

· **Trade name:** Silberchlorid 75% Ag
Silver chloride 75% Ag

· **Article number:** 4020310101

· **CAS Number:**
7783-90-6

· **EC number:**
232-033-3

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

No further relevant information available.

Application of the substance / the mixture

Initial product for chemical reactions
Chemicals for synthesis

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Wieland Edelmetalle GmbH
Schwenninger Str. 13
75179 Pforzheim
Telefon +49 (07231)-1393-0, Telefax +49 (07231)-1393-100

Further information obtainable from:

Wieland Edelmetalle GmbH
www.wieland-edelmetalle.de
msds@wieland-edelmetalle.de

1.4 Emergency telephone number:

Emergency CONTACT (24-Hour-Number):GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05 GHS09

· **Signal word** Warning

Hazard statements

H290 May be corrosive to metals.

H410 Very toxic to aquatic life with long lasting effects.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.09.2018

Version number 3

Revision: 22.08.2016

Trade name: Silberchlorid 75% Ag
Silver chloride 75% Ag

(Contd. of page 1)

- **Precautionary statements**
 - P234 Keep only in original container.
 - P273 Avoid release to the environment.
 - P390 Absorb spillage to prevent material damage.
 - P406 Store in corrosive resistant container with a resistant inner liner.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**
 - 7783-90-6 silver chloride
- **Identification number(s)**
- **EC number:** 232-033-3

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
 - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Seek immediate medical advice.
- **4.2 Most important symptoms and effects, both acute and delayed**
 - No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
 - CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
 - Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Avoid formation of dust.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 - Pick up mechanically.
 - Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.

(Contd. on page 3)

Trade name: Silberchlorid 75% Ag
Silver chloride 75% Ag

See Section 13 for disposal information.

(Contd. of page 2)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Prevent formation of dust.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 Unsuitable material for receptacle: aluminium.
 Unsuitable material for receptacle: steel.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

7783-90-6 silver chloride

WEL	Long-term value: 0.01 mg/m ³ as Ag
-----	--

· PNECs

7783-90-6 silver chloride

PNECfreshwater	0.04 µg/l (-) (Soluble Ag)
PNECmarine	0.86 µg/l (-) (Soluble Ag)
PNECsediment freshw.	438 mg/kg dwt (-) (Ag)
PNECsediment marine	438 mg/kg dwt (-) (Ag)
PNECsoil	0.794 mg/kg wwt (-) (Ag)
PNECSTP	0.025 mg/l (-) (Soluble Ag)

- **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:

Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.

- **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.

· Protection of hands:



Protective gloves

· Material of gloves

Plastic gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

(Contd. on page 4)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 27.09.2018

Version number 3

Revision: 22.08.2016

Trade name: Silberchlorid 75% Ag
Silver chloride 75% Ag

(Contd. of page 3)

- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Powder
· Colour:	Whitish
· Odour:	Odourless

· **pH-value:** Not applicable

· Change in condition

· Melting point/freezing point:	455 °C
· Initial boiling point and boiling range:	1550 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Product is not flammable.

· **Ignition temperature:** Not applicable

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· Explosion limits:

· Oxidising properties	None
-------------------------------	------

· **Vapour pressure at 912 °C:** 1 hPa

· **Density at 20 °C:** 5.56 g/cm³

· Solubility in / Miscibility with

· water at 25 °C:	0.00188 g/l
· Organic solvents:	0.0 %

· **Solids content:** 100.0 %

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with strong oxidising agents.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Hydrogen chloride (HCl)

GB

(Contd. on page 5)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 27.09.2018

Version number 3

Revision: 22.08.2016

**Trade name: Silberchlorid 75% Ag
Silver chloride 75% Ag**

(Contd. of page 4)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

7783-90-6 silver chloride

Oral	LD50	>2,000 mg/kg (rat)
------	------	--------------------

- **Primary irritant effect:**
- **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 sensitisation** Based on available data, the classification criteria are not met.

· **Repeated dose toxicity**

7783-90-6 silver chloride

Oral	Repeat dose tox.	30 mg/kg bw/d (rat) (with silver nanomaterial)
------	------------------	--

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential**

7783-90-6 silver chloride

Oral	BCF	70 (Cyprinus carpio) (Test material: silver cyanid)
------	-----	---

- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Contact manufacturer for recycling information.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 05 00	gases in pressure containers and discarded chemicals

(Contd. on page 6)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 27.09.2018

Version number 3

Revision: 22.08.2016




Trade name: Silberchlorid 75% Ag
Silver chloride 75% Ag

(Contd. of page 5)

16 05 07* | discarded inorganic chemicals consisting of or containing hazardous substances

- **Uncleaned packaging:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning. Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	3260
· 14.2 UN proper shipping name · ADR · IMDG, IATA	3260 CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (silver chloride) CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (silver chloride)
· 14.3 Transport hazard class(es) · ADR 	8 (C2) Corrosive substances. 8
· IMDG 	8 Corrosive substances. 8
· IATA 	8 Corrosive substances. 8
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR):	No Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number:	Warning: Corrosive substances. 8 F-A,S-B

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.09.2018

Version number 3

Revision: 22.08.2016

Trade name: Silberchlorid 75% Ag
Silver chloride 75% Ag

(Contd. of page 6)

- | | |
|--|--|
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR | |
| · Limited quantities (LQ) | 5KG |
| · Transport category | 3 |
| · Tunnel restriction code | E |
| · UN "Model Regulation": | UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Directive 2012/18/EU
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category E1** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **National regulations:**
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Abteilung Umweltschutz
- **Abbreviations and acronyms:**
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organisation
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 PNEC: Predicted No-Effect Concentration (REACH)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Met. Corr. 1: Corrosive to metals – Category 1
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
- *** Data compared to the previous version altered.**