

<b>MATERIAL SAFETY DATA SHEET</b>		
According to regulation (EU) no.1907/2006		
<b>SILVER CHLORIDE</b>		
Revision : 01	Date: August 19 <sup>th</sup> , 2022	MSDS Number : 194
Section 1 - Chemical Product and Company Identification		

- 1.1 Product Name** : SILVER CHLORIDE
- Synonyms** : -
- CAS No.** : 7783-90-6
- HS Code** : 2843 29 00
- Chemical Formula** : AgCl
- Molecular Weight** : 143.32 g/mol
- Product Code** : A-2170
- Brand** : SMART-LAB
- 1.2 Manufacturer** : PT.Smart-Lab Indonesia
- Address** : Ruko Boulevard Taman Tekno Blok E No. 9-11, BSD Serpong, Tangerang - Indonesia
- Website** : [www.smartlabid.com](http://www.smartlabid.com)
- Email** : sales@smartlabid.com
- For information** : Telp: +62 21- 7588 0205(Hunting), fax: +62-21-7588 0198
- Emergency Telephone:** +62-21-7588 0205(Hunting)
- 1.3 Application** : General Chemical reagent

## Section 2 - Hazards Identification

- 2.1 Classification of the substance or mixture**
- Classification according to Regulation (EC) No 1272/2008**
- Corrosive to Metals (Category 1), H290
- Short-term (acute) aquatic hazard (Category 1), H400
- Long-term (chronic) aquatic hazard (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16

### 2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

H290

May be corrosive to metals.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P234

Keep only in original packaging.

P273

Avoid release to the environment.

P390

Absorb spillage to prevent material damage.

P391

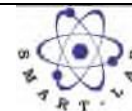
Collect spillage.

P501

Dispose of contents/ container to an approved waste disposal plant.

**MATERIAL SAFETY DATA SHEET**

According to regulation (EU) no.1907/2006

**SILVER CHLORIDE**

Revision : 01

Date: August 19<sup>th</sup>, 2022

MSDS Number : 194

Supplemental Hazard Statements none

**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## Section 3 - Composition, Information on Ingredients

**3.1 Substances**

Synonyms : SILVER (I) CHLORIDE  
 Formula : AgCl  
 Molecular weight : 143.32 g/mol  
 CAS-No. : 7783-90-6  
 EC-No. : 232-033-3  
 Index-No. : -

**3.2 Mixture****Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component	Classification	Concentration
Silver chloride CAS-No. 7783-90-6 EC-No. 232-033-3	Aquatic Acute 1; Aquatic Chronic 1; H400, H410 M-Factor - Aquatic Acute: 100	<=100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

## Section 4 - First Aid Measures

**4.1 Description of first aid measures****General advice**

Show this material safety data sheet to the doctor in attendance.

**If inhaled**

After inhalation: fresh air.

**In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

**In case of eye contact**

After eye contact: rinse out with plenty of water. Remove contact lenses.

**If swallowed**

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

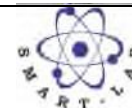
**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

**MATERIAL SAFETY DATA SHEET**  
According to regulation (EU) no.1907/2006

**SILVER CHLORIDE**

Revision : 01

Date: August 19<sup>th</sup>, 2022

MSDS Number : 194

## Section 5 - Firefighting Measures

**5.1 Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

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

Hydrogen chloride, gas Silver/silver oxides, Not combustible. Ambient fire may liberate hazardous vapours.

**5.3 Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus.

**5.4 Further information**

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Section 6 - Accidental Release Measures

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

**6.4 Reference to other sections**

For disposal see section 13.

## Section 7 - Handling and Storage

**7.1 Precautions for safe handling**

For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Storage conditions

No metal containers. Tightly closed. Dry. Handle and store under inert gas. Light sensitive. Moisture sensitive.

Storage class

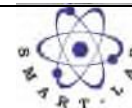
Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

**MATERIAL SAFETY DATA SHEET**

According to regulation (EU) no.1907/2006

**SILVER CHLORIDE**

Revision : 01

Date: August 19<sup>th</sup>, 2022

MSDS Number : 194

## Section 8 - Exposure Controls, Personal Protection

**8.1 Control parameters**

Ingredients with workplace control parameters

**8.2 Exposure controls****Appropriat engineering controls**

Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipmen****Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Full contact**

Material: Nitrile rubber  
 Minimum layer thickness: 0.11 mm  
 Break through time: 480 min  
 Material tested: Dermatril® (KCL 740, Size M)

**Splash contact**

Material: Nitrile rubber  
 Minimum layer thickness: 0.11 mm  
 Break through time: 480 min  
 Material tested: Dermatril® (KCL 740, Size M)

**Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Control of environmental exposure**

Do not let product enter drains.

<b>MATERIAL SAFETY DATA SHEET</b>		
According to regulation (EU) no.1907/2006		
<b>SILVER CHLORIDE</b>		
Revision : 01	Date: August 19 <sup>th</sup> , 2022	MSDS Number : 194

## Section 9 - Physical and Chemical Properties

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

Appearance	solid
	Colour : white
Odour	odourless
Odour Threshold	Not applicable
pH	No data available
Melting point/freezingpoint	Melting point/range: 455 °C - lit.
Initial boiling point and boiling range	1.554 °C at 1.013 hPa
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	The product is not flammable.
Upper/lower flammability or explosive limits	No data available
Vapour pressure	1 mmHg at 912 °C
Vapour density	No data available
Relative density	5.560 g/cm <sup>3</sup> at 25 °C
Water solubility	0,00188 g/l at 25 °C
Partition coefficient: noctanol/water	Not applicable for inorganic substances
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	none

**9.2 Other safety information**

No data available

## Section 10 - Stability and Reactivity

**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Risk of explosion with:  
Ammonia, Alkali metals, powdered aluminium

Violent reactions possible with:  
peroxi compounds, sulfoxides

**10.4 Conditions to avoid**

Avoid moisture.

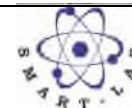
**10.5 Incompatible materials**

Metals

**10.6 Hazardous decomposition products**

In the event of fire: see section 5

**MATERIAL SAFETY DATA SHEET**  
According to regulation (EU) no.1907/2006

**SILVER CHLORIDE**

Revision : 01

Date: August 19<sup>th</sup>, 2022

MSDS Number : 194

## Section 11 - Toxicological Information

**11.1 Information on toxicological effects****Acute toxicity**

LD50 Oral - Rat - male and female - &gt; 5.000 mg/kg (OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 4 h (OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation (OECD Test Guideline 405)

**Respiratory or skin sensitisation**

No data available(Silver chloride)

**Germ cell mutagenicity**

Test Type: Micronucleus test

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 487

Result: negative Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Disilver(1+) sulfate Test

Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: Metabolic activation

Method: OECD Test Guideline 476

Result: negative

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: Disilver(1+) sulfate Test

Type: Micronucleus test

Species: Rat Application

Route: Oral

Method: OECD Test Guideline 474

Result: negative

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC..

**Reproductive toxicity**

No data available(Silver chloride)

**Specific target organ toxicity - single exposure**

No data available(Silver chloride)

**Specific target organ toxicity - repeated exposure**

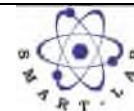
No data available

**Aspiration hazard**

No data available(Silver chloride)

**MATERIAL SAFETY DATA SHEET**

According to regulation (EU) no.1907/2006

**SILVER CHLORIDE**

Revision : 01

Date: August 19<sup>th</sup>, 2022

MSDS Number : 194

**Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 30 Days - NOAEL (No observed adverse effect level) - 1,5 mg/kg - LOAEL (Lowest observed adverse effect level) - 1,5 mg/kg Remarks: (ECHA)

RTECS: VW3563000

May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver). To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Hazardous properties cannot be excluded, but are relatively improbable due to the compound's poor water solubility. Handle in accordance with good industrial hygiene and safety practice.)

## Section 12 - Ecological Information

**12.1 Toxicity**

Toxicity to fish

semi-static test LC50 - Pimephales promelas (fathead minnow) - 0,0012 mg/l - 96 h (US-EPA)

Remarks: (referred to the cation) (in analogy to similar products)

The value is given in analogy to the following substances: Silver nitrate

Toxicity to daphnia and other aquatic invertebrates semi-static test

LC50 - Daphnia magna (Water flea) - 0,00022 mg/l - 48 h

Remarks: (referred to the cation) (ECHA)

The value is given in analogy to the following substances: Silver nitrate

Toxicity to bacteria static test NOEC - Bacteria - 0,025 mg/l - 13,3 min

Remarks: (ECHA) (in analogy to similar products)

The value is given in analogy to the following substances: Silver nitrate

**12.2 Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

Bioaccumulation Cyprinus carpio (Carp) - 41 d at 20 °C(silver chloride)

Bioconcentration factor (BCF): 70

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

No data available

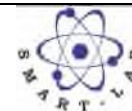
## Section 13 - Disposal Considerations

**13.1 Waste treatment methods****Product**

Dissolve or mix the material with a combustible solvent and burn in a chem scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

**MATERIAL SAFETY DATA SHEET**

According to regulation (EU) no.1907/2006

**SILVER CHLORIDE**

Revision : 01

Date: August 19<sup>th</sup>, 2022

MSDS Number : 194

**Contaminated packaging**

Dispose of as unused product.

## Section 14 - Transport Information

**14.1 UN number**

ADR/RID: 3077

IMDG: 3077

IATA: 3077

**14.2 UN proper shipping name**

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver chloride)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver chloride)

IATA: Environmentally hazardous substance, solid, n.o.s. (Silver chloride)

**14.3 Transport hazard class(es)**

ADR/RID: 8

IMDG: 8

IATA: 8

**14.4 Packaging group**

ADR/RID: III

IMDG: III

IATA: III

**14.5 Environmental hazards**

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

**14.6 Special precautions for user****Further information**

No data available

## Section 15 - Regulatory Information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**National legislation**

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : ENVIRONMENTAL HAZARDS

**Other regulations**

Take note of Dir 94/33/EC on the protection of young people at work.

**15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out

## Section 16 - Additional Information

**Full text of H-Statements referred to under sections 2 and 3.**

H290 May be corrosive to metals.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**National Fire Protection Association (U.S.A.):**

Health: 2

Flammability: 0

Reactivity: 0



<b>MATERIAL SAFETY DATA SHEET</b>		
According to regulation (EU) no.1907/2006		
<b>SILVER CHLORIDE</b>		
Revision : 01	Date: August 19 <sup>th</sup> , 2022	MSDS Number : 194

**Revision history :**

Date	Rev	Description
Feb 27, 2019	00	-
August 19, 2022	01	thorough revision

**Further information**

*The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. PT. Smartlab Indonesia shall not be held liable for any damage resulting from handling or from contact with the above product.*