

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** SILVER CHLORIDE

**Other means of identification**

**Product No.:** 2142, 2147

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor Information**

**Manufacturer**

Avantor Performance Materials, Inc.  
3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

Telephone:

Customer Service: 855-282-6867

Fax:

610-573-2610

Contact Person:

Environmental Health & Safety

E-mail:

info@avantormaterials.com

**Emergency telephone number:** CHEMTREC: 1-800-424-9300 within US and Canada

CHEMTREC: 1-703-527-3887 outside US and Canada

## 2. Hazard(s) identification

**Hazard Classification**

**Physical Hazards**

Corrosive to metals Category 1

**Environmental Hazards**

Acute hazards to the aquatic environment Category 1

Chronic hazards to the aquatic environment Category 1

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Warning

**Hazard Statement:** May be corrosive to metals.  
Very toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.

**Precautionary Statement**

**Prevention:** Keep only in original container. Avoid release to the environment.

**Response:** Absorb spillage to prevent material damage. Collect spillage.

**Storage:** Store in corrosive resistant container with a resistant inner liner.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

**3. Composition/information on ingredients**

**Substances**

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
SILVER CHLORIDE		7783-90-6	90 - 100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**Ingestion:** Rinse mouth thoroughly. Drink a few glasses of water or milk. Call a POISON CENTER or doctor/physician if you feel unwell.

**Inhalation:** Move to fresh air. Get medical attention if symptoms persist.

**Skin Contact:** Wash skin thoroughly with soap and water for several minutes. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.

**Eye contact:** Flush thoroughly with water. If irritation occurs, get medical assistance.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** May cause irritation to skin, eyes, and respiratory tract.

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

**Treatment:** Treat symptomatically. Symptoms may be delayed.

**5. Fire-fighting measures**

**General Fire Hazards:** In case of fire and/or explosion do not breathe fumes.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None known.

**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures:** Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Keep unauthorized personnel away. Keep upwind. Avoid inhalation of dust. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:** Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.

**Notification Procedures:** Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling:** Use personal protective equipment as required. Avoid contact with eyes. Avoid contact with skin. Avoid inhalation of dust. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only in well-ventilated areas. Wash thoroughly after handling. See Section 8 of the SDS for Personal Protective Equipment.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Store in cool, dry place. Store in a well-ventilated place. Store away from incompatible materials. Store in corrosive resistant container with a resistant inner liner.

**8. Exposure controls/personal protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	type	Exposure Limit Values	Source
SILVER CHLORIDE - as Ag	TWA	0,01 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
SILVER CHLORIDE - as Ag	STEL	0,03 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0,01	Canada. British Columbia OELs.

		mg/m <sup>3</sup>	(Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Silver chloride (AgCl) - as Ag	TWA	0,01 mg/m <sup>3</sup>	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
SILVER CHLORIDE - as Ag	TWAEV	0,01 mg/m <sup>3</sup>	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Silver chloride (AgCl) - as Ag	8 HR ACL	0,01 mg/m <sup>3</sup>	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	0,03 mg/m <sup>3</sup>	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
SILVER CHLORIDE - as Ag	TWA	0,01 mg/m <sup>3</sup>	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
SILVER CHLORIDE - as Ag	TWA	0,01 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)

**Appropriate Engineering Controls** No data available.

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

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

**Eye/face protection:** Wear safety glasses with side shields (or goggles). Use tight fitting goggles if dust is generated.

**Skin Protection**

**Hand Protection:** Wear protective gloves.

**Skin protection:** Wear suitable protective clothing.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with a high efficiency particulate filter.

**Hygiene measures:** Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Avoid contact with eyes, skin, and clothing.

**9. Physical and chemical properties**

## Appearance

<b>Physical state:</b>	solid
<b>Form:</b>	Powder.
<b>Color:</b>	White
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting point/freezing point:</b>	455 °C
<b>Initial boiling point and boiling range:</b>	1.550 °C
<b>Flash Point:</b>	not applicable
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Relative density:</b>	5,56 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Slightly Soluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other information</b>	
<b>Molecular weight:</b>	143,32 g/mol (AgCl)

## 10. Stability and reactivity

<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong oxidizing agents. Ammonia. Alkali metals.
<b>Hazardous Decomposition Products:</b>	Chlorine. Silver fumes.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion:</b>	May cause irritation of the gastrointestinal tract.
<b>Inhalation:</b>	Dust may irritate respiratory system.

**Skin Contact:** May cause irritation.

**Eye contact:** May irritate eyes.

#### Information on toxicological effects

##### Acute toxicity (list all possible routes of exposure)

###### Oral

**Product:** No data available.

###### Dermal

**Product:** No data available.

###### Inhalation

**Product:** No data available.

##### Repeated dose toxicity

**Product:** No data available.

##### Skin Corrosion/Irritation

**Product:** May cause skin irritation.

##### Serious Eye Damage/Eye Irritation

**Product:** No data available.

##### Respiratory or Skin Sensitization

**Product:** Not a skin sensitizer.

##### Carcinogenicity

**Product:** This substance has no evidence of carcinogenic properties.

##### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

##### US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

##### ACGIH Carcinogens:

No carcinogenic components identified

##### Germ Cell Mutagenicity

###### In vitro

**Product:** No mutagenic components identified

###### In vivo

**Product:** No mutagenic components identified

##### Reproductive toxicity

**Product:** No components toxic to reproduction

##### Specific Target Organ Toxicity - Single Exposure

**Product:** None known.

##### Specific Target Organ Toxicity - Repeated Exposure

**Product:** None known.

##### Aspiration Hazard

**Product:** Not classified

**Other effects:** None known.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Specified substance(s):

SILVER CHLORIDE LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 0,51 mg/l Mortality

##### Aquatic Invertebrates

**Product:** No data available.

##### Specified substance(s):

SILVER CHLORIDE  
 LC 50 (Water flea (*Daphnia magna*), 10 d): > 12 mg/l Mortality  
 LC 50 (Water flea (*Daphnia magna*), 96 h): > 1,93 mg/l Mortality  
 LC 50 (Scud (*Hyalella azteca*), 96 h): > 1,93 mg/l Mortality  
 LC 50 (Water flea (*Ceriodaphnia dubia*), 96 h): > 1,93 mg/l Mortality  
 LC 50 (Water flea (*Daphnia magna*), 96 h): > 1,93 mg/l Mortality

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic Invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

### Persistence and Degradability

#### Biodegradation

**Product:** The product is not readily biodegradable.

#### BOD/COD Ratio

**Product:** No data available.

### Bioaccumulative Potential

#### Bioconcentration Factor (BCF)

**Product:** No data available on bioaccumulation.

#### Partition Coefficient n-octanol / water (log Kow)

**Product:** No data available.

**Mobility in Soil:** No data available.

**Other Adverse Effects:** Very toxic to aquatic life with long lasting effects.

## 13. Disposal considerations

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### TDG

UN Number	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(SILVER CHLORIDE)
Class	9
Packing Group	III
Label(s)	9
Subsidiary risk label	–

### IMDG

UN Number:	UN 3077
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(SILVER CHLORIDE)
Transport Hazard Class(es)	
Class:	9
Label(s):	9
EmS No.:	F-A, S-F
Packing Group:	III
Marine Pollutant:	Yes
Special precautions for user:	–

### IATA

UN Number:	UN 3077
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s.(Silver chloride)
Transport Hazard Class(es):	
Class:	9
Label(s):	9
Marine Pollutant:	Yes
Packing Group:	III
Special precautions for user:	–

## 15. Regulatory information

### Canada Federal Regulations

#### List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

#### Export Control List (CEPA 1999, Schedule 3)

Not Regulated

### National Pollutant Release Inventory (NPRI)

#### Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5 Not Regulated

#### Canada. Canadian Environmental Protection Act (CEPA). National Pollutant Release Inventory (NPRI) (Parts 1-4)

NPRI SILVER CHLORIDE

### Greenhouse Gases

Not Regulated



**Controlled Drugs and Substances Act**

CA CDSI	Not Regulated
CA CDSII	Not Regulated
CA CDSIII	Not Regulated
CA CDSIV	Not Regulated
CA CDSV	Not Regulated
CA CDSVII	Not Regulated
CA CDSVIII	Not Regulated

**Precursor Control Regulations**

Not Regulated

**International regulations**

**Montreal protocol**

not applicable

**Stockholm convention**

not applicable

**Rotterdam convention**

not applicable

**Kyoto protocol**

not applicable

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

<b>16. Other information, including date of preparation or last revision</b>
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<b>Issue Date:</b>	20.04.2016
<b>Revision Date:</b>	No data available.
<b>Version #:</b>	2.0
<b>Further Information:</b>	No data available.

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