

## **Silver nitrate concentrate**

38310-1EA

Version 1.3

Revision Date 16.12.2022

### **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

#### **1.1. Product identifier**

Product name : Silver nitrate concentrate  
SDS-number : 000000021833  
Type of product : Mixture  
Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.

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

Use of the Substance/Mixture : Laboratory chemicals  
Uses advised against : none

#### **1.3. Details of the supplier of the safety data sheet**

Company : Honeywell International Inc. Honeywell International, Inc.  
115 Tabor Road 115 Tabor Road  
07950-2546 Morris Plains Morris Plains, NJ 07950-2546  
USA USA  
Telephone :  
For further information, please contact: : [SafetyDataSheet@Honeywell.com](mailto:SafetyDataSheet@Honeywell.com)

#### **1.4. Emergency telephone number**

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)  
+1-303-389-1414 (Medical)  
Country based Poison Control Center : see chapter 15.1

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### **SECTION 2: Hazards identification**

#### **2.1. Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

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Corrosive to metals Category 1  
H290 May be corrosive to metals.  
Skin corrosion Category 1B  
H314 Causes severe skin burns and eye damage.  
Short-term (acute) aquatic hazard Category 1  
H400 Very toxic to aquatic life.  
Long-term (chronic) aquatic hazard Category 1  
H410 Very toxic to aquatic life with long lasting effects.

### 2.2. Label elements

#### REGULATION (EC) No 1272/2008

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	:	P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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Hazardous components : Silver nitrate  
which must be listed on the  
label

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Silver nitrate	7761-88-8 047-001-00-2 231-853-9	Ox. Sol. 2; H272 Met. Corr. 1; H290 Skin Corr. 1B; H314 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 25 % - < 50 %	M(Aquatic Acute) = 1.000 M(Aquatic Chronic) = 100

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.  
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:

First aider needs to protect himself. Move out of dangerous area. Immediately take off contaminated clothing and rinse body with plenty of water.

#### Inhalation:

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If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

*Skin contact:*

Wash off immediately with plenty of water. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

*Eye contact:*

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Call a physician immediately.

*Ingestion:*

Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.

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

No data available

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

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

*Suitable extinguishing media:*

Water spray jet  
Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry powder

*Extinguishing media which shall not be used for safety reasons:*

High volume water jet

#### 5.2. Special hazards arising from the substance or mixture

The product itself does not burn.  
Fire may cause evolution of:  
Metal oxides  
nitrogen oxides

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.  
No unprotected exposed skin areas.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Provide adequate ventilation.

#### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

#### 6.3. Methods and materials for containment and cleaning up

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Soak up with inert absorbent material.  
Pick for disposal in tightly closed containers

### 6.4. Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

*Advice on safe handling:*

Wear personal protective equipment. Avoid contact with skin and eyes. Wear suitable protective clothing. Do not breathe vapours or spray mist.

*Advice on protection against fire and explosion:*

The product itself does not burn. Normal measures for preventive fire protection.

*Hygiene measures:*

Take off all contaminated clothing immediately. Remove and wash contaminated clothing before re-use. Keep working clothes separately. When using do not eat or drink. Wash hands before breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities

*Further information on storage conditions:*

Keep only in the original container, tightly closed, in a well ventilated place.

### 7.3. Specific end use(s)

no additional data available

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**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits:**

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
Silver nitrate	EH40 WEL	as Ag		Listed
Silver nitrate	EH40 WEL TWA	0,01 mg/m <sup>3</sup> as Ag		
Silver nitrate	EU ELV TWA	0,01 mg/m <sup>3</sup> as Ag		Indicative

TWA - Time weighted average

**DNEL/ PNEC-Values**

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
Silver nitrate	Workers / Long-term systemic effects		0,016 mg/m <sup>3</sup>	Inhalation	
Silver nitrate	Consumers / Long-term systemic effects		0,0063 mg/m <sup>3</sup>	Inhalation	
Silver nitrate	Consumers / Long-term systemic effects		0,02mg/kg bw/d	Ingestion	

Component	Environmental compartment / Value	Remarks
Silver nitrate	Fresh water: 0,00004 mg/l	
Silver nitrate	Marine water: 0,00086 mg/l	Assessment factor: 10

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Silver nitrate	Sewage treatment plant: 0,025 mg/l	
Silver nitrate	Fresh water sediment: 438,13 mg/kg dw	Assessment factor: 10
Silver nitrate	Marine sediment: 438,13 mg/kg dw	Assessment factor: 10
Silver nitrate	Soil: 1,41 mg/kg dw	

### 8.2. Exposure controls

#### Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Do not breathe vapours or spray mist.

#### Engineering measures

Use with local exhaust ventilation.

#### Personal protective equipment

##### *Respiratory protection:*

In the case of dust or aerosol formation use respirator with an approved filter.

##### *Hand protection:*

Glove material: Natural Latex

Break through time: > 480 min

Glove thickness: 0,6 mm

Lapren®706

Latex gloves

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de



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*Eye protection:*

Safety goggles

*Skin and body protection:*

Wear suitable protective equipment.

Wear as appropriate:

Protective suit

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: liquid
Colour	: colourless
Odour	: odourless
molecular weight	: 169,87 g/mol
Melting point/range	: No data available
Boiling point/boiling range	: > 100 °C
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No decomposition if used as directed.
pH	: No data available
Viscosity, kinematic	: No data available

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Water solubility : soluble

Partition coefficient: n-octanol/water : No data available

Vapour pressure : No data available

Density : No data available

Relative vapour density : No data available

### 9.2 Other Information

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Corrosive to metals : Corrosive to metals

Evaporation rate : No data available

Viscosity, dynamic : No data available

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under recommended storage conditions.

### 10.2. Chemical stability

No decomposition if used as directed.

### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.  
Corrosive in contact with metals

### 10.4. Conditions to avoid

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Protect from heat/overheating.  
Exposure to light.

### 10.5. Incompatible materials

Corrosive in contact with metals

### 10.6. Hazardous decomposition products

nitrogen oxides  
Metal oxides

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### *Acute oral toxicity:*

LD50

Species: Rat

Value: > 5.110 mg/kg

Method: OECD Test Guideline 401

Test substance: anhydrous substance

#### *Acute dermal toxicity:*

LD50

Species: Rat

Value: > 2.000 mg/kg

Method: OECD Test Guideline 402

Test substance: anhydrous substance

#### *Acute inhalation toxicity:*

No data available

#### *Skin irritation:*

Species: reconstructed human epidermis (RhE)

Result: Causes burns.

Method: OECD Test Guideline 431

Test substance: anhydrous substance

#### *Eye irritation:*

Species: Rabbit

Result: Risk of serious damage to eyes.

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Test substance: anhydrous substance

*Respiratory or skin sensitisation:*  
No data available

*Carcinogenicity:*  
Note: No data available

*Germ cell mutagenicity:*  
Cell type: mouse lymphoma cells  
Metabolic activation: with metabolic activation  
Result: negative  
Method: OECD Test Guideline 476  
Test substance: anhydrous substance

Cell type: mouse lymphoma cells  
Metabolic activation: without metabolic activation  
Result: positive  
Method: OECD Test Guideline 476  
Test substance: anhydrous substance

*Reproductive toxicity:*  
Remarks: No data available

*Aspiration hazard:*  
No data available

### 11.2. Information on other hazards

Endocrine disrupting properties  
No data available

*Other information:*  
No data available

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## SECTION 12: Ecological information

### 12.1. Toxicity

*Toxicity to fish:*  
LC50  
semi-static test  
Species: Pimephales promelas (fathead minnow)

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Value: 1.2 µg/l  
Exposure time: 96 h  
Test substance: anhydrous substance

EC10  
flow-through test  
Species: *Oncorhynchus mykiss* (rainbow trout)  
Value: 0.17 µg/l  
Exposure time: 196 d  
Test substance: anhydrous substance

*Toxicity to aquatic plants:*  
EC10  
Growth rate  
flow-through test  
Species: *Chlamydomonas reinhardtii*  
Value: 0.54 µg/l  
Exposure time: 24 h  
Test substance: anhydrous substance

*Toxicity to Microorganisms:*  
NOEC  
static test  
Species: Bacteria  
Value: 0,025 mg/l  
Exposure time: 13,3 min  
Test substance: anhydrous substance

*Toxicity to aquatic invertebrates:*  
LC50  
semi-static test  
Species: *Daphnia magna* (Water flea)  
Value: 0.22 µg/l  
Exposure time: 48 h  
Test substance: anhydrous substance

*Chronic toxicity to aquatic invertebrates:*  
EC10  
semi-static test  
Species: *Ceriodaphnia dubia* (water flea)  
Value: 6.48 µg/l

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Exposure time: 7 d  
Test substance: anhydrous substance

### 12.2. Persistence and degradability

*Biodegradability:*

The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

No data available

### 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 data available

### 12.7. Other adverse effects

Do not flush into surface water or sanitary sewer system.

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

*Product:*

Dispose according to legal requirements.

*Packaging:*

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

*Further information:*

Provisions relating to waste:  
EC Directive 2006/12/EC; 2008/98/EEC  
Regulation No. 1013/2006

For personal protection see section 8.

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### SECTION 14: Transport information

#### 14.1 UN number

ADR/RID:3264

IMDG:3264

IATA:3264

#### 14.2 UN proper shipping name

ADR/RID:CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(SILVER NITRATE, SOLUTION)

IMDG:CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(SILVER NITRATE,SOLUTION)

IATA:Corrosive liquid, acidic, inorganic, n.o.s.(Silver nitrate, Solution)

#### 14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

#### 14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

#### 14.5 Environmental hazards

ADR/RID: yes

Marine pollutant: yes

#### 14.6 Special precautions for user

IMDG Code segregation group (SGG1) – ACIDS,

#### 14.7 Maritime transport in bulk according to IMO instruments

No data available

### SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC		Not applicable
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

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**Poison Control Center**

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation); +46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111



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### Other inventory information

US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended  
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)  
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List  
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)  
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)  
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)  
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand  
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)  
On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

### Text of H-statements referred to under heading 3

Silver nitrate : H272 May intensify fire; oxidizer.  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

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H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

### Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very bioaccumulative substance

PBT Persistent, bioaccumulative und toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

This information should not constitute a guarantee for any specific product properties.

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