

Silver nitrate**10220-500G**

Version 1.1

Revision Date 12/08/2021

Print Date 05/11/2023

SECTION 1. IDENTIFICATION

Product name : Silver nitrate

Number : 000000020262

Product Use Description : Laboratory chemicals

Manufacturer or supplier's details : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or**
: **+1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : crystalline

Color : colourless

Odor : odourless

Classification of the substance or mixture

Classification of the substance or mixture : Oxidizing solids, Category 2
Corrosive to metals, Category 1
Skin corrosion, Category 1B

GHS Label elements, including precautionary statements

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Symbol(s)

:



Signal word

:

Danger

Hazard statements

:

May intensify fire; oxidizer.
May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary statements

:

Prevention:

Keep away from heat.
Keep/ Store away from clothing/ combustible materials.
Take any precaution to avoid mixing with combustibles.
Keep only in original container.
Do not breathe dust or mist.
Wash skin thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/ doctor.
Wash contaminated clothing before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Absorb spillage to prevent material damage.

Storage:

Store locked up.
Store in corrosive resistant container with a resistant inner liner.

Disposal:

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

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Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : AgNO₃

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Silver nitrate	7761-88-8	<=100.00 %

SECTION 4. FIRST AID MEASURES

General advice : First aider needs to protect himself. Move out of dangerous area.

Inhalation : If inhaled, remove to fresh air. 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 : Protect unharmed eye. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion : A person suspected to have swallowed the substance who is conscious should be given water to drink. Take to a doctor immediately together with this card

Notes to physician

Most important symptoms/effects, acute and delayed : No information available.

Indication of immediate : Treat symptomatically.

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medical attention and
special treatment needed, if
necessary

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Foam
Carbon dioxide (CO₂)
Dry powder
- Specific hazards during firefighting : The product itself does not burn.
Strong oxidizer. Contact with other material may cause fire.
In case of fire hazardous decomposition products may be produced such as:
Toxic metal oxide fumes
Nitrogen oxides (NO_x)
- Special protective equipment for firefighters : Personal protection through wearing a tightly closed chemical protection suit and a self-contained breathing apparatus.
No unprotected exposed skin areas.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Wear personal protective equipment. Unprotected persons must be kept away.
Ensure adequate ventilation.
Avoid dust formation.
Do not breathe dust.
Do not get in eyes, on skin, or on clothing.
- Environmental precautions : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Use mechanical handling equipment.
Protect from contamination.
Do not pick up with the help of saw-dust or other combustible

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substances.
Sweep up and shovel into suitable containers for disposal.
Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE**Handling**

Precautions for safe handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Never return unused material to storage receptacle.
Protect against light.
Do not breathe dust.
Do not get in eyes, on skin, or on clothing.

Advice on protection against fire and explosion : Keep away from easily oxidizable materials.
Keep away from combustible material.

Storage

Conditions for safe storage, including any incompatibilities : Store in original container.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep away from heat and sources of ignition.
Do not store near combustible materials.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Do not breathe dust.
Do not get in eyes, on skin, or on clothing.

Engineering measures : Use with local exhaust ventilation.

Eye protection : Safety goggles

Hand protection : Latex gloves
Gloves must be inspected prior to use.

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Replace when worn.

Skin and body protection : Wear suitable protective equipment.
Lab coat
Protective suit

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Keep working clothes separately.
Separate rooms are required for washing, showering and changing clothes.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Silver nitrate	7761-88-8	TWA : Time weighted average	0.01 mg/m ³	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended

Further information	:	Expressed as : as Ag			
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Silver nitrate	7761-88-8	REL : Recommended exposure limit (REL):	0.01 mg/m ³	2016	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
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Further information	:	Form of exposure : Dust. Expressed as : as Hg			
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Silver nitrate	7761-88-8	PEL : Permissible exposure limit	0.01 mg/m ³	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
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Further information	:	Expressed as : as Ag			
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SAFETY DATA SHEET



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Silver nitrate	7761-88-8	TWA : Time weighted average	0.01 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
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Further information	:	Expressed as : as Ag			
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Silver nitrate	7761-88-8	TWA : Time weighted average	0.01 mg/m3	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
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Further information	:	Expressed as : as Ag			
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Silver nitrate	7761-88-8	REL : Recomm ended exposure limit (REL):	0.01 mg/m3	2016	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
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Further information	:	Form of exposure : Dust. Expressed as : as Hg			
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Silver nitrate	7761-88-8	PEL : Permissi ble exposure limit	0.01 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
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Further information	:	Expressed as : as Ag			
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Silver nitrate	7761-88-8	TWA : Time weighted average	0.01 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
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Further information	:	Expressed as : as Ag			
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: crystalline
Color	: colourless
Odor	: odourless
Odor threshold	: Note: No data available
pH	: Note: No data available
Melting point/range	: 212 °C
Boiling point/boiling range	: Note: Not applicable, Decomposes on heating.
Flash point	: Note: Not applicable
Evaporation rate	: Note: No data available
Flammability	: The product is not flammable.
Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Vapor pressure	: Note: No data available
Vapor density	: Note: No data available
Density	: ca. 4.350 g/cm ³ at 20 °C
Water solubility	: 2,192.0 g/l at 20 °C

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Partition coefficient: n-octanol/water	: Note: No data available
Ignition temperature	: Note: Not applicable
Auto-ignition temperature	: Note: not auto-flammable
Decomposition temperature	: 444 °C Note: No decomposition if used as directed.
Viscosity, dynamic	: Note: No data available
Viscosity, kinematic	: Note: No data available
Oxidizing properties	: The substance or mixture is classified as oxidizing with the category 2.
Bulk density	: ca. 2,400 kg/m ³
Corrosivity	: Note: Corrosive to metals

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: May intensify fire; oxidizer.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: With most metals.
Conditions to avoid	: Protect from heat/overheating. Protect from contamination. Exposure to light.
Incompatible materials	: Reactions with combustible substances. Reactions with metals in powder form. As oxidising agent, attacks organic substances such as wood, paper, fats.

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Corrosive in contact with metals

Hazardous decomposition
products: nitrogen oxides
Toxic metal compounds**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity : LD50: > 5,110 mg/kg
Species: Rat, male and female
Method: OECD Test Guideline 401
Test substance: REACH dossier "read-across"

Acute inhalation toxicity : Note: No data available

Acute dermal toxicity : LD50: > 2,000 mg/kg
Species: Rat, male and female
Method: OECD Test Guideline 402
Test substance: REACH dossier "read-across"

Skin irritation : Species: reconstructed human epidermis (RhE)
Result: Causes burns.
Method: OECD Test Guideline 431

Eye irritation : Species: Rabbit
Result: Risk of serious damage to eyes.
Method: No information available.

Sensitisation : Note: No data available

Genotoxicity in vitro : Cell type: mouse lymphoma cells
Metabolic activation: with metabolic activation
Result: negative
Method: OECD Test Guideline 476
Test substance: REACH dossier "read-across"

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: Cell type: mouse lymphoma cells
Metabolic activation: without metabolic activation
Result: positive
Method: OECD Test Guideline 476
Test substance: REACH dossier "read-across"

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : semi-static test
LC50: 1.2 µg/l
Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)

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

Toxicity to daphnia and other aquatic invertebrates : semi-static test
LC50: 0.22 µg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae : flow-through test
EC10: 0.54 µg/l
Exposure time: 24 h
Species: Chlamydomonas reinhardtii

Toxicity to bacteria : static test
NOEC: 0.025 mg/l
Exposure time: 13.3 min
Species: Bacteria

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : semi-static test
EC10: 6.48 µg/l
Exposure time: 7 d

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Species: Ceriodaphnia dubia (water flea)

Further information on ecology

Additional ecological information : Do not flush into surface water or sanitary sewer system.
The methods for determining biodegradability are not applicable to inorganic substances.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT UN/ID No. : UN 1493
Proper shipping name : SILVER NITRATE
Class : 5.1
Packing group : II
Hazard Labels : 5.1

IATA UN/ID No. : UN 1493
Description of the goods : SILVER NITRATE
Class : 5.1
Packaging group : II
Hazard Labels : 5.1
Packing instruction (cargo aircraft) : 562
Packing instruction (passenger aircraft) : 558
Packing instruction (passenger aircraft) : Y544

IMDG UN/ID No. : UN 1493
Description of the goods : SILVER NITRATE
Class : 5.1
Packaging group : II
Hazard Labels : 5.1
EmS Number : F-A, S-Q
Marine pollutant : yes

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SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemicals Act (AICC), 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

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 1 lbs
: Silver nitrate

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SARA 302 Components	:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	:	The following components are subject to reporting levels established by SARA Title III, Section 313:
	:	Silver nitrate 7761-88-8
SARA 311/312 Hazards	:	Reactivity Hazard Acute Health Hazard
CERCLA Reportable Quantity	:	1 lbs
California Prop. 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Massachusetts RTK	:	Silver nitrate 7761-88-8
New Jersey RTK	:	Silver nitrate 7761-88-8
Pennsylvania RTK	:	Silver nitrate 7761-88-8

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 3*	3
Flammability	: 0	0
Physical Hazard	: 2	
Instability	:	0
Special hazard	:	OX

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

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Further information

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.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 01/18/2017

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group