



# Silver Nitrate, 0.1N (0.1M)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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Version: 1.3

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixtures  
Product name : Silver Nitrate, 0.1N (0.1M)  
Product code : 1.3680

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.

#### 1.3. Supplier

NEUTRON PHARMACHEMICAL CO  
98, 9th Floor, Borjsaz Building, Azadi Ave, Tehran, Iran.  
T 021-66906732-3 - F 021-66581408  
[info@neutronpharmaceutical.com](mailto:info@neutronpharmaceutical.com) -  
[www.neutronpharmaceutical.com](http://www.neutronpharmaceutical.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 125

### SECTION 2: Hazard(s) identification

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

##### GHS-US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319	Causes serious eye irritation
Hazardous to the aquatic environment - Acute Hazard Category 3	H402	Harmful to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P264 - Wash exposed skin thoroughly after handling  
P273 - Avoid release to the environment  
P280 - Wear eye protection, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash it before reuse  
P501 - Dispose of contents/container to comply with local, state and federal regulations

#### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None.

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### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Water	(CAS-No.) 7732-18-5	98.3	Not classified
Silver Nitrate	(CAS-No.) 7761-88-8	1.7	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects	: If you feel unwell, seek medical advice.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: May stain the skin. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Nausea. Vomiting. Diarrhoea. Blue/grey discoloration of the skin. Methemoglobinemia. Change in urine output.
Symptoms/effects upon intravenous administration	: Not available.
Chronic symptoms	: Blue/grey discoloration of the skin. Methemoglobinemia.

### 4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance. Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No data available on indirect explosion hazard. No data available on direct explosion hazard.
Reactivity	: Product is not explosive.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Not applicable.

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### SECTION 6: Accidental release measures

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

General measures : Evacuate area. Isolate from fire, if possible, without unnecessary risk. Absorb spillage to prevent material damage.

##### 6.1.1. For non-emergency personnel

Protective equipment : Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures : Wash exposed skin thoroughly after handling.

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

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, Ignition sources, incompatible materials. Keep container closed when not in use.

Incompatible products : Chlorides. Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Silver Nitrate (7761-88-8)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup> (Silver Soluble compounds, as Ag; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>
IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.01 mg/m <sup>3</sup>
Water (7732-18-5)		
Not applicable		

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Environmental exposure controls : Avoid release to the environment.

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### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Safety glasses. Gloves.



#### Hand protection:

Wear protective gloves

#### Eye protection:

Chemical goggles or safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Respiratory protection not required in normal conditions

#### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Clear, colorless liquid.
Color	: Colorless
Odor	: Odorless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1 g/ml
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available.
Oxidizing properties	: No data available.

### 9.2. Other information

No additional information available

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Product is not explosive.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

Chlorides. Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

Nitrogen oxides.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Likely routes of exposure : Dermal; Ingestion; Inhalation; oral; Skin and eye contact

Acute toxicity : Not classified

Silver Nitrate (7761-88-8)	
LD50 oral rat	1173 mg/kg (Rat)
ATE US (oral)	1173 mg/kg body weight
Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : May stain the skin. Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : Nausea. Vomiting. Diarrhoea. Blue/grey discoloration of the skin. Methemoglobinemia. Change in urine output.

Symptoms/effects upon intravenous administration : Not available.

Chronic symptoms : Blue/grey discoloration of the skin. Methemoglobinemia.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

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Silver Nitrate, 0.1N (0.1M)	
LC50 fish 1	59.9 mg/l
Silver Nitrate (7761-88-8)	
EC50 Daphnia 1	0.0006 mg/l (EC50; 48 h)
LC50 fish 2	0.006 mg/l (LC50; 96 h; Salmo gairdneri)

### 12.2. Persistence and degradability

Silver Nitrate, 0.1N (0.1M)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Silver Nitrate (7761-88-8)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
Water (7732-18-5)	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

Silver Nitrate, 0.1N (0.1M)	
Bioaccumulative potential	Not established.
Silver Nitrate (7761-88-8)	
BCF fish 1	11 - 19 (BCF)
BCF fish 2	15 - 150 (BCF)
Log Pow	0.19 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Water (7732-18-5)	
Bioaccumulative potential	Not established.

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.
Other information	: Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional legislation (waste)	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT  
Not regulated

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### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Silver Nitrate, 0.1N (0.1M)

SARA Section 311/312 Hazard Classes	Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

##### Silver Nitrate (7761-88-8)

RQ (Reportable quantity, section 304 of EPA's List of Lists)	1 lb
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#### 15.2. International regulations

##### CANADA

##### Silver Nitrate (7761-88-8)

Listed on the Canadian DSL (Domestic Substances List)

##### EU-Regulations

No additional information available

##### National regulations

##### Silver Nitrate (7761-88-8)

Listed on the Canadian IDL (Ingredient Disclosure List)

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

### SECTION 16: Other information

Revision date : 08/22/2017

Other information : None.

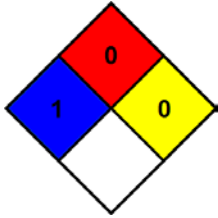
Full text of H-phrases: see section 16:

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

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NFPA health hazard	: 1 - Materials that, under emergency conditions, can cause significant irritation.	
NFPA fire hazard	: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.	
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.	
Hazard Rating		
Health	: 1 Slight Hazard - Irritation or minor reversible injury possible	
Flammability	: 0 Minimal Hazard - Materials that will not burn	
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.	
Personal protection	: B B - Safety glasses, Gloves	

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