



**SAFETY DATA SHEET**  
**In Accordance with ISO/DIS 11014**

Review Date 02/18/2015

Revision Date 06/20/2012

**1 Identification of the Substance/Mixture and Company**

**Product Name:** Type 1 Silver Solution

**MSDS Code:** SSKC398

**Product Description:** Kit Component

**Manufacturer/Supplier:**

American MasterTech  
1330 Thurman Street  
Lodi, CA 95240  
USA  
(800) 860-4073

**European Authorized Representative:**

Emergo Europe  
Moleensraat 15  
2513 BH The Hague,  
The Netherlands

**Emergency Telephone Number:** Infotrac (800) 535-5053 (24 hours) - International (011) 352-323-3500

**2 Hazards Identification**

**Classification of the substance or mixture**



GHS05 Corrosion

Skin Corr. 1B      H314 Causes severe skin burns and eye damage.



GHS09 Environment

Aquatic Chronic 2    H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4      H302 Harmful if swallowed.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R34: Causes burns.



N; Dangerous for the environment

R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

**Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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**Label elements****GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).**Hazard pictograms**

GHS05

GHS07

GHS09

**Signal word** Danger**Hazard-determining components of labeling:**

silver nitrate

**Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

Toxic to aquatic life with long lasting effects.

**Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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 or doctor/physician.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 2

Fire = 0

Reactivity = 0

**Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.

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## 3 Composition

**Chemical characterization: Mixtures****Description:** Mixture of the substances listed below with nonhazardous additions.

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| Dangerous components: |   |      |
|-----------------------|---|------|
| CAS: 7761-88-8        | silver nitrate  | <25% |
| EINECS: 231-853-9     | ⚠ Ox. Sol. 2, H272; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1; Aquatic Chronic 1, H410 |      |

### 4 First Aid Measures

**Description of first aid measures**
**General information:** Immediately remove any clothing soiled by the product.

**After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

**Information for doctor:**
**Most important symptoms and effects, both acute and delayed:** No further relevant information available.

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

No further relevant information available.

### 5 Firefighting Measures

**Extinguishing media**
**Suitable extinguishing agents:**

 CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture:** No further relevant information available.

**Advice for firefighters**
**Protective equipment:** No special measures required.

### 6 Accidental Release Measures

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

Wear protective equipment. Keep unprotected persons away.

**Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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### 7 Handling and Storage

**Handling:****Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about protection against explosions and fires:** No special measures required.**Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** No special requirements.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep receptacle tightly sealed.**Specific end use(s):** No further relevant information available.

### 8 Exposure Controls/Personal Protection

**Additional information about design of technical systems:** No further data; see item 7.**Control parameters****Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The lists that were valid during the creation were used as basis.**Exposure controls:****Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles

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### 9 Physical and Chemical Properties

|   |   |
|---|---|
| <b>Information on basic physical and chemical properties</b>      |   |
| <b>General Information</b>  |   |
| <b>Appearance</b>   |   |
| Form:   | Fluid   |
| Color:  | Colorless                                     |
| Odor:   | Odorless                                      |
| Odor threshold:   | Not determined.                               |
| pH-value:   | Not determined.                               |
| <b>Change in condition</b>  |   |
| Melting point/Melting range:                                      | Undetermined.                                 |
| Boiling point/Boiling range:                                      | 100°C (212 °F)                                |
| Flash point:  | Not applicable.                               |
| Flammability (solid, gaseous):                                    | Not applicable.                               |
| <b>Ignition temperature:</b>                                      |   |
| Decomposition temperature:  | Not determined.                               |
| Auto igniting:  | Product is not selfigniting.                  |
| Danger of explosion:  | Product does not present an explosion hazard. |
| <b>Explosion limits:</b>  |   |
| Lower:  | Not determined.                               |
| Upper:  | Not determined.                               |
| Vapor pressure at 20°C (68 °F):                                   | 23 hPa (17 mm Hg)                             |
| Density at 20°C (68 °F):  | 1.536 g/cm <sup>3</sup> (12.818 lbs/gal)      |
| Relative density:   | Not determined.                               |
| Vapour density:   | Not determined.                               |
| Evaporation rate:   | Not determined.                               |
| <b>Solubility in / Miscibility with</b>                           |   |
| Water:  | Fully miscible.                               |
| <b>Segregation coefficient (n-octanol/water):</b> Not determined. |   |
| Dynamic:  | Not determined.                               |
| Kinematic:  | Not determined.                               |
| Other information:  | No further relevant information available.    |

### 10 Stability and Reactivity

Reactivity:

Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid: No further relevant information available.

Incompatible materials: No further relevant information available.

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**Hazardous decomposition products:** No dangerous decomposition products known.
 

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## 11 Toxicology Information

**Information on toxicological effects**
**Acute toxicity:**
**LD/LC50 values that are relevant for classification:**
**7761-88-8 silver nitrate**

|      |      |                  |
|------|------|------------------|
| Oral | LD50 | 50 mg/kg (mouse) |
|------|------|------------------|

**Primary irritant effect:**
**On the skin:** Caustic effect on skin and mucous membranes.

**On the eye:** Strong caustic effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**Carcinogenic categories**
**IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

**NTP (National Toxicology Program)**

 None of the ingredients are listed.
 

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## 12 Ecological Information

**Toxicity:**
**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability:** No further relevant information available.

**Behavior in environmental systems:**
**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

**Ecotoxicological effects:**
**Remark:** Toxic for fish

**Additional ecological information:**
**General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

**Results of PBT and vPvB assessment**
**PBT:** Not applicable.

**vPvB:** Not applicable.
 

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**Other adverse effects:** No further relevant information available.

### 13 Disposal Considerations

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport Information

|   |                 |
|---|-----------------|
| <b>UN-Number</b><br>DOT, ADR, ADN, IMDG, IATA                                   | Void            |
| <b>UN proper shipping name</b><br>DOT, ADR, ADN, IMDG, IATA                     | Void            |
| <b>Transport hazard class(es)</b><br>DOT, ADR, ADN, IMDG, IATA<br>Class         | Void            |
| <b>Packing group</b><br>DOT, ADR, IMDG, IATA                                    | Void            |
| <b>Environmental hazards</b><br><b>Marine pollutant:</b>                        | No              |
| <b>Special precautions for user:</b>  | Not applicable. |
| <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</b> | Not applicable. |
| <b>UN "Model Regulation":</b>   | -               |

### 15 Regulatory Information

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

**Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

**Section 313 (Specific toxic chemical listings):**

7761-88-8 | silver nitrate

**TSCA (Toxic Substances Control Act):**

All ingredients are listed.

**Proposition 65**

**Chemicals known to cause cancer:**

None of the ingredients is listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

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|   |
|---|
| <b>Chemicals known to cause reproductive toxicity for males:</b>        |
| None of the ingredients are listed.                                     |
| <b>Chemicals known to cause developmental toxicity:</b>                 |
| None of the ingredients are listed.                                     |
| <b>Carcinogenic categories</b>  |
| <b>EPA (Environmental Protection Agency)</b>                            |
| None of the ingredients are listed.                                     |
| <b>TLV (Threshold Limit Value established by ACGIH)</b>                 |
| None of the ingredients are listed.                                     |
| <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b> |
| None of the ingredients are listed.                                     |
| <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>        |
| None of the ingredients are listed.                                     |

**GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**


GHS05    GHS07    GHS09

**Signal word** Danger

**Hazard-determining components of labelling:**

silver nitrate

**Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

Toxic to aquatic life with long lasting effects.

**Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Do not breathe dust/fume/gas/mist/vapours/spray.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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 or doctor/physician.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no



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responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

**Department issuing SDS:** Regulatory Department

**Contact:** Phone (800) 860-4073

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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