Section 1 - Chemical Product and Company Identification

MSDS Name:
Silver Nitrate-Nitric Acid, APHA for Sulfate
Catalog Numbers:
LC22750
Synonyms:
None
Company Identification:
LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238
Company Phone Number:
(412) 826-5230
Emergency Phone Number:
(800) 424-9300
CHEMTREC Phone Number:
(800) 424-9300 or
011-703-527-3887

Section 2 – Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>&gt;98</td>
</tr>
<tr>
<td>7697-37-2</td>
<td>Nitric acid</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>7761-88-8</td>
<td>Silver nitrate</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

Emergency Overview

Appearance: clear, colorless solution
Caution. May cause eye, skin, and gastrointestinal irritation. May cause methemoglobinemia if ingested.
Target Organs: eyes, skin, mucous membranes

Potential Health Effects

Eye:
May cause eye irritation.

Skin:
May cause skin irritation.

Ingestion:
May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. May cause permanent blue-gray discoloration of the eyes, skin, mucous membranes, and internal organs.
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**Inhalation:**  
May cause respiratory tract irritation.

**Chronic:**  
May cause methemoglobinemia, which is characterized by chocolate brown-colored blood, headache, weakness, dizziness, cyanosis, rapid heart rate, unconsciousness, and possible death.

### Section 4 - First Aid Measures

**Eyes:**  
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

**Skin:**  
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid at once.

**Ingestion:**  
Do not induce vomiting. Give conscious victim 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid at once.

**Inhalation:**  
Move victim to fresh air immediately. If breathing is difficult, administer oxygen. Give artificial respiration if necessary. Get medical aid at once.

**Notes to Physician:**  
Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:**  
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Contact with metals may evolve flammable hydrogen gas.

**Extinguishing Media:**  
For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

**Autoignition Temperature:**  
No information found.

**Flash Point:**  
No information found.

**NFPA Rating:**  
Health- 2, Flammability- 0, Instability- 0

**Explosion Limits:**  
Lower: n/a  Upper: n/a

### Section 6 - Accidental Release Measures

**General Information:**  
Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:
Absorb spill with inert material such as sand, vermiculite, or diatomaceous earth, and transfer to a suitable container labeled for later disposal.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Do not ingest or inhale. Do not get in eyes, on skin, or on clothing.

Storage:
Store tightly capped in a cool, dry, well-ventilated area away from incompatible materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Facilities using or storing this material should be equipped with an eyewash and safety shower. Provide local exhaust or general dilution ventilation to keep airborne levels below the permissible exposure limits.

Exposure Limits:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>None of the components are on this list</td>
<td>None of the components are on this list</td>
<td>None of the components are on this list</td>
</tr>
<tr>
<td>Nitric acid</td>
<td>2 ppm TWA 4 ppm STEL</td>
<td>2 ppm TWA 4 ppm STEL 25 ppm IDLH</td>
<td>2 ppm TWA 5 mg/m3 TWA</td>
</tr>
<tr>
<td>Silver nitrate</td>
<td>None of the components are on this list</td>
<td>None of the components are on this list</td>
<td>None of the components are on this list</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs:
Nitric acid: 2 ppm TWA; 4 ppm STEL

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133. Do not wear contact lenses when working with chemicals.

Skin:
Wear appropriate protective gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid
Color: Colorless
Odor: Odorless
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Slightly acidic</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information found.</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information found.</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information found.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information found.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No information found.</td>
</tr>
<tr>
<td>Freezing/Melting Point</td>
<td>No information found.</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information found.</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>No information found.</td>
</tr>
<tr>
<td>Specific Gravity/Density</td>
<td>1.0</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>No information found.</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>No information found.</td>
</tr>
</tbody>
</table>

Section 10 - Stability and Reactivity

**Chemical Stability:**
Stable under normal temperatures and pressures.

**Conditions to Avoid:**
Incompatible materials, excess heat.

**Incompatibilities with Other Materials:**
Strong bases, reducing agents, alcohols, ammonia, hydrogen peroxide, acetylene, organic material, charcoal, metals, cyanides.

**Hazardous Decomposition Products:**
Oxides of nitrogen, oxygen, silver oxides.

**Hazardous Polymerization:**
Has not been reported

Section 11 - Toxicological Information

**RTECS:**
CAS# 7732-18-5: ZC0110000.
CAS# 7697-37-2: QU5775000; QU5900000.
CAS# 7761-88-8: VW4725000.

**LD50/LC50:**
CAS# 7732-18-5:
- Oral, rat: LD50 = >90 mL/kg

CAS# 7697-37-2:
- Inhalation, rat: LC50 = 130 mg/m3/4H
- Inhalation, rat: LC50 = 7 mg/L/1H

CAS# 7761-88-8:
- Oral, rat: LD50 = 1173 mg/kg

**Carcinogenicity:**
CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 7697-37-2: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
CAS# 7761-88-8: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.
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**Epidemiology:**
No information found

**Teratogenicity:**
Teratogenic effects have occurred in laboratory animals.

**Reproductive:**
Reproductive toxicity effects have occurred in laboratory animals.

**Mutagenicity:**
No information found

**Neurotoxicity:**
No information found

### Section 12 - Ecological Information
No information found

### Section 13 - Disposal Considerations
Dispose of in accordance with Federal, State, and local regulations.

### Section 14 - Transport Information

**US DOT**
- **Shipping Name:** Not regulated.
- **Hazard Class:**
- **UN Number:**
- **Packing Group:**

### Section 15 - Regulatory Information

**US Federal**

**TSCA:**
- CAS# 7732-18-5 is listed on the TSCA Inventory.
- CAS# 7697-37-2 is listed on the TSCA Inventory.
- CAS# 7761-88-8 is listed on the TSCA Inventory.

**SARA Reportable Quantities (RQ):**
- CAS# 7697-37-2: final RQ = 1000 pounds (454 kg)
- CAS# 7761-88-8: final RQ = 1 pound (0.454 kg)

**CERCLA/SARA Section 313:**
Nitric acid is not at a high enough concentration to be reportable under Section 313.

**OSHA - Highly Hazardous:**
- CAS# 7697-37-2 is considered highly hazardous by OSHA.

**US State**

**State Right to Know:**
Nitric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
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Silver nitrate can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Massachusetts.

**California Regulations:**
None

**European/International Regulations**

**Canadian DSL/NDSL:**
- CAS# 7732-18-5 is listed on Canada's DSL List.
- CAS# 7697-37-2 is listed on Canada's DSL List.
- CAS# 7761-88-8 is listed on Canada's DSL List.

**Canada Ingredient Disclosure List:**
- CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
- CAS# 7697-37-2 is listed on Canada's Ingredient Disclosure List.
- CAS# 7761-88-8 is listed on Canada's Ingredient Disclosure List.

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**Section 16 - Other Information**

MSDS Creation Date: November 26, 1998
Revision Date: February 28, 2011

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