1. IDENTIFICATION

Product Identifier
Product Name Silver Paste

Other means of identification
UN/ID No UN3082

Recommended use of the chemical and restrictions on use
Recommended Use Laboratory chemicals and manufacture of substances.

Details of the supplier of the safety data sheet
Supplier Address Nexceris, LLC
404 Enterprise Drive
Lewis Center, OH 43035
www.nexceris.com

Emergency Telephone Number
Company Phone Number Non-emergency calls/questions: 1-614-842-6606
Fax: 1-614-842-6607
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Silver liquid Physical State Liquid

Classification

| Serious eye damage/eye irritation | Category 2 |

Hazards Not Otherwise Classified (HNOC)
May be harmful if swallowed

Signal Word
Warning

Hazard Statements
Causes serious eye irritation

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Precautionary Statements - Response
IF IN EYES: 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.

Other Hazards
Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>7440-22-4</td>
<td>70</td>
</tr>
<tr>
<td>Diethyl Glycol Ether Acetate</td>
<td>112-15-2</td>
<td>30</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is “proprietary” and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

General Advice
Provide this SDS to medical personnel for treatment.

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.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes.

Inhalation
Remove to fresh air.

Ingestion
Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects

Symptoms
Causes serious eye irritation. May be harmful if swallowed.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
Not determined.

Hazardous Combustion Products
Carbon monoxide. Carbon dioxide (CO2). Silver/silver oxides.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

**Personal Precautions**
Use personal protective equipment as required.

**Environmental Precautions**
Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

**Methods for Containment**
Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

7. HANDLING AND STORAGE

Precautions for safe handling

**Advice on Safe Handling**
Handle in accordance with good industrial hygiene and safety practice. Wear eye/face protection. Wash face, hands, and any exposed skin thoroughly after handling.

Conditions for safe storage, including any incompatibilities

**Storage Conditions**
Keep container tightly closed and store in a cool, dry and well-ventilated place. Avoid contact with air/oxygen. Check container pressure periodically to prevent explosive peroxides.

**Incompatible Materials**
Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver 7440-22-4</td>
<td>TWA: 0.1 mg/m³ dust and fume</td>
<td>TWA: 0.01 mg/m³ dust (vacated) TWA: 0.01 mg/m³</td>
<td>IDLH: 10 mg/m³ dust</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

**Engineering Controls**
Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

**Eye/Face Protection**
Safety glasses.

**Skin and Body Protection**
Impervious gloves and protective clothing are recommended.

**Respiratory Protection**
In case of insufficient ventilation, wear suitable respiratory equipment.

**General Hygiene Considerations**
Handle in accordance with good industrial hygiene and safety practice.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Silver liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Silver</td>
<td>Odor</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Not miscible</td>
<td>Difficult to mix</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Product is not self igniting</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Reactivity**

Not reactive under normal conditions.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

May form explosive peroxides. Reacts with strong oxidizers.

**Conditions to Avoid**

Keep out of reach of children.

**Incompatible Materials**

Oxidizing agents.

**Hazardous Decomposition Products**

Decomposition will not occur if handled and stored properly. Carbon oxides. Silver oxides.

### 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

**Eye Contact**

Causes serious eye irritation.

**Skin Contact**

Avoid contact with skin.
Inhalation  
Avoid breathing vapors or mists.

Ingestion  
May be harmful if swallowed.

### Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>&gt; 2000 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diethyl Glycol Ether Acetate</td>
<td>11 g/kg (Rat)</td>
<td>= 15100 µL/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

### Information on physical, chemical and toxicological effects

#### Symptoms
Please see section 4 of this SDS for symptoms.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Carcinogenicity
Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

#### Numerical measures of toxicity
Not determined

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity
Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver 7440-22-4</td>
<td></td>
<td>0.00155 - 0.00293: 96 h Pimephales promelas mg/L LC50 static 0.0062: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.064: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>0.00024: 48 h Daphnia magna mg/L EC50 Static</td>
<td></td>
</tr>
</tbody>
</table>

#### Persistence/Degradability
Not determined.

#### Bioaccumulation
Not determined.

#### Mobility
Not determined.

#### Other Adverse Effects
Not determined

### 13. DISPOSAL CONSIDERATIONS

#### Waste Treatment Methods

<table>
<thead>
<tr>
<th>Disposal of Wastes</th>
<th>Disposal should be in accordance with applicable regional, national and local laws and regulations.</th>
</tr>
</thead>
</table>
Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver 7440-22-4</td>
<td></td>
<td>Included in waste stream: F039</td>
<td>5.0 mg/L regulatory level</td>
<td></td>
</tr>
</tbody>
</table>

California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver 7440-22-4</td>
<td>Toxic</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

Note
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
UN/ID No: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Silver)
Hazard Class: 9
Packing Group: III

IATA
UN/ID No: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Silver)
Hazard Class: 9
Packing Group: III

IMDG
UN/ID No: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Silver), marine pollutant
Hazard Class: 9
Packing Group: III

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECS</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>Present</td>
<td>X</td>
<td></td>
<td>Present</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diethyl Glycol Ether Acetate</td>
<td>Present</td>
<td>X</td>
<td></td>
<td>Present</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
US Federal Regulations

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>1 lb</td>
<td></td>
<td>RQ 1 lb final RQ</td>
</tr>
<tr>
<td>7440-22-4</td>
<td></td>
<td></td>
<td>RQ 0.454 kg final RQ</td>
</tr>
</tbody>
</table>

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver - 7440-22-4</td>
<td>7440-22-4</td>
<td>70</td>
<td>1.0</td>
</tr>
<tr>
<td>Diethyl Glycol Ether Acetate - 112-15-2</td>
<td>112-15-2</td>
<td>30</td>
<td>1.0</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7440-22-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diethyl Glycol Ether Acetate - 112-15-2</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Issue Date: 16-Apr-2015  
Revision Date: 01-Oct-2015  
Revision Note: Company name change

Disclaimer
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.

End of Safety Data Sheet