SAFETY DATA SHEET
Metalon® JS-A221AE Silver ink

Section 1. Identification

GHS product identifier : Metalon® JS-A221AE Silver ink
Chemical name : Silver ink
Product code : Not available.
Other means of identification : Not available.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Ink.

Supplier's details : NCC Nano LLC dba NovaCentrix
400 Parker Drive, Suite 1110, Austin, TX  78728
Tel.: 512-491-9500
Fax: 512-491-0002
Email: msds@novacentrix.com
Website: www.novacentrix.com

Emergency telephone number (with hours of operation) : CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER
N.A. Toll Free: 1-800-255-3924
International: 01-813-248-0585

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
AQUATIC HAZARD (ACUTE) - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning
Hazard statements : H319 - Causes serious eye irritation.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear eye or face protection.
P273 - Avoid release to the environment.
P264 - Wash hands thoroughly after handling.

Response : P391 - Collect spillage.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical attention.

Storage : Not applicable.
**Section 2. Hazards identification**

**Disposal**: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified**: None known.

**Section 3. Composition/information on ingredients**

**Substance/mixture**: Mixture

**Chemical name**: Silver ink

**Other means of identification**: Not available.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>≥40 - ≤60</td>
<td>7440-22-4</td>
</tr>
<tr>
<td>2,2'-Oxybisethanol</td>
<td>≥3 - ≤10</td>
<td>111-46-6</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>≥2 - ≤10</td>
<td>67-63-0</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

**Section 4. First aid measures**

**Description of necessary first aid measures**

**Eye contact**: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.

**Inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin contact**: Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion**: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Most important symptoms/effects, acute and delayed**

**Potential acute health effects**

**Eye contact**: Causes serious eye irritation.

**Inhalation**: No known significant effects or critical hazards.

**Skin contact**: No known significant effects or critical hazards.

**Ingestion**: No known significant effects or critical hazards.
Section 4. First aid measures

**Over-exposure signs/symptoms**

- **Eye contact**: Adverse symptoms may include the following:
  - pain or irritation
  - watering
  - redness
- **Inhalation**: No known significant effects or critical hazards.
- **Skin contact**: No known significant effects or critical hazards.
- **Ingestion**: No known significant effects or critical hazards.

**Indication of immediate medical attention and special treatment needed, if necessary**

- **Notes to physician**: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- **Specific treatments**: No specific treatment.
- **Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

**Extinguishing media**

- **Suitable extinguishing media**: Use an extinguishing agent suitable for the surrounding fire.
- **Unsuitable extinguishing media**: None known.

**Specific hazards arising from the chemical**

- This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous thermal decomposition products**

- Decomposition products may include the following materials:
  - carbon dioxide
  - carbon monoxide
  - metal oxide/oxides

**Special protective actions for fire-fighters**

- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters**

- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

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

- **For non-emergency personnel**: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

- **For emergency responders**: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Section 6. Accidental release measures

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>ACGIH TLV (United States, 3/2017).</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 mg/m³ 8 hours. Form: Dust and fumes</td>
</tr>
<tr>
<td></td>
<td>NIOSH REL (United States, 10/2016).</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.01 mg/m³, (Ag) 10 hours. Form: Metal dust and soluble</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (United States, 6/2016).</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.01 mg/m³, (Ag) 8 hours.</td>
</tr>
<tr>
<td>2,2’-Oxybisethanol</td>
<td>AIHA WEEL (United States, 10/2011).</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³ 8 hours.</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>ACGIH TLV (United States, 3/2017).</td>
</tr>
<tr>
<td></td>
<td>TWA: 200 ppm 8 hours.</td>
</tr>
<tr>
<td></td>
<td>STEL: 400 ppm 15 minutes.</td>
</tr>
</tbody>
</table>
Section 8. Exposure controls/personal protection

Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state: Liquid. [Low viscosity]

Color: Brown to gray.

Odor: Diethylene glycol / isopropanol.

Odor threshold: Not available.

pH: 6 to 8

Melting point: Not available.

Boiling point: Not available.
Section 9. Physical and chemical properties

- Flash point: Not available.
- Evaporation rate: Not available.
- Flammability (solid, gas): Not available.
- Lower and upper explosive (flammable) limits: Not available.
- Vapor pressure: Not available.
- Vapor density: Not available.
- Relative density: 1.6 to 2.2
- Solubility: Miscible with water.
- Partition coefficient: n-octanol/water: Not available.
- Auto-ignition temperature: Not available.
- Decomposition temperature: Not available.
- Viscosity: Dynamic (@ 20°C (68°F)): 5 to 50 mPa·s (5 to 50 cP)
- Flow time (ISO 2431): Not available.

Section 10. Stability and reactivity

- Reactivity: No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability: The product is stable.
- Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid: No specific data.
- Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials.
- Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2’-Oxybisethanol</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>11890 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>12000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>LD50 Dermal</td>
<td>Rabbit</td>
<td>12800 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>5000 mg/kg</td>
<td>-</td>
</tr>
</tbody>
</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2’-Oxybisethanol</td>
<td>Eyes - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>50 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Human</td>
<td>-</td>
<td>72 hours 112 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Intermittent 500 mg</td>
<td>-</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>10 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>100 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>500 mg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Eyes - Severe irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Section 11. Toxicological information

**Sensitization**
There is no data available.

**Mutagenicity**
There is no data available.

**Carcinogenicity**

**Classification**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>-</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

**Reproductive toxicity**
There is no data available.

**Teratogenicity**
There is no data available.

**Specific target organ toxicity (single exposure)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol</td>
<td>Category 3</td>
<td>Narcotic effects</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity (repeated exposure)**
There is no data available.

**Aspiration hazard**
There is no data available.

**Information on the likely routes of exposure**

**Potential acute health effects**

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Symptoms related to the physical, chemical and toxicological characteristics**

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Adverse symptoms may include the following: pain or irritation, watering, redness</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

<table>
<thead>
<tr>
<th>Effects</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential immediate effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Potential delayed effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>

**Long term exposure**

<table>
<thead>
<tr>
<th>Effects</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential immediate effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
</tbody>
</table>
Section 11. Toxicological information

**Potential delayed effects**: No known significant effects or critical hazards.

**Potential chronic health effects**

- **General**: No known significant effects or critical hazards.
- **Carcinogenicity**: No known significant effects or critical hazards.
- **Mutagenicity**: No known significant effects or critical hazards.
- **Teratogenicity**: No known significant effects or critical hazards.
- **Developmental effects**: No known significant effects or critical hazards.
- **Fertility effects**: No known significant effects or critical hazards.

**Numerical measures of toxicity**

**Acute toxicity estimates**

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>6143.6 mg/kg</td>
</tr>
</tbody>
</table>

Section 12. Ecological information

**Toxicity**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>Acute EC50 1.4 µg/L Marine water</td>
<td>Algae - Chroomonas sp.</td>
<td>4 days</td>
</tr>
<tr>
<td></td>
<td>Acute EC50 0.24 µg/L Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 11 µg/L Fresh water</td>
<td>Crustaceans - Ceriodaphnia reticulata</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 2.13 µg/L Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td></td>
<td>Chronic NOEC 5 mg/L Marine water</td>
<td>Algae - Glenodinium halli</td>
<td>72 hours</td>
</tr>
<tr>
<td>2,2’-Oxybisethanol</td>
<td>Acute LC50 75200000 µg/L Fresh water</td>
<td>Fish - Pimephales promelas</td>
<td>96 hours</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>Acute EC50 10100 mg/L Fresh water</td>
<td>Daphnia - Daphnia magna</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 1400000 µg/L Marine water</td>
<td>Crustaceans - Crangon crangon</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 4200 mg/L Fresh water</td>
<td>Fish - Rasbora heteromorpha</td>
<td>96 hours</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

There is no data available.

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP&lt;sub&gt;ow&lt;/sub&gt;</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>-1.98</td>
<td>70</td>
<td>low</td>
</tr>
<tr>
<td>2,2’-Oxybisethanol</td>
<td>0.05</td>
<td>100</td>
<td>low</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td></td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

**Mobility in soil**

**Soil/water partition coefficient (K<sub>OC</sub>)**: Not available.

**Other adverse effects**: No known significant effects or critical hazards.
Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN3082</td>
<td>UN3082</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver), Marine pollutant (Silver)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

AERG: 171

DOT-RQ Details: Silver 1000 lbs / 454 kg

Additional information

DOT Classification: Non-bulk packages of this product are not regulated as hazardous materials in package sizes less than the product reportable quantity, unless transported by inland waterway. The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg. **Reportable quantity** 1669.4 lbs / 757.93 kg [105.38 gal / 398.91 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

IMDG: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Special precautions for user: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Section 15. Regulatory information

U.S. Federal regulations:
- **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
- **United States inventory (TSCA 8b)**: All components are listed or exempted.
- **Clean Water Act (CWA) 307**: Silver

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs):
- Not listed

Clean Air Act Section 602 Class I Substances:
- Not listed

Clean Air Act Section 602 Class II Substances:
- Not listed

DEA List I Chemicals (Precursor Chemicals):
- Not listed

DEA List II Chemicals (Essential Chemicals):
- Not listed

SARA 302/304

Composition/information on ingredients:
- No products were found.

SARA 304 RQ:
- Not applicable.

SARA 311/312

Classification:
- SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

Composition/information on ingredients:

<table>
<thead>
<tr>
<th>Name</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,2'-Oxybisethanol</td>
<td>ACUTE TOXICITY (oral) - Category 4</td>
</tr>
<tr>
<td>Isopropyl Alcohol</td>
<td>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A, FLAMMABLE LIQUIDS - Category 2</td>
</tr>
<tr>
<td></td>
<td>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A, SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3</td>
</tr>
</tbody>
</table>

SARA 313

<table>
<thead>
<tr>
<th>Product name</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form R - Reporting</td>
<td></td>
</tr>
<tr>
<td>requirements</td>
<td></td>
</tr>
<tr>
<td>Silver</td>
<td>7440-22-4</td>
</tr>
<tr>
<td>Supplier notification</td>
<td></td>
</tr>
<tr>
<td>Silver</td>
<td>7440-22-4</td>
</tr>
</tbody>
</table>

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations:

Massachusetts:
- The following components are listed: Silver; Isopropyl Alcohol

New York:
- The following components are listed: Silver

New Jersey:
- The following components are listed: Silver; Isopropyl Alcohol

Pennsylvania:
- The following components are listed: Silver; 2,2'-Oxybisethanol; Isopropyl Alcohol

California Prop. 65:
- No products were found.
Section 16. Other information

Procedure used to derive the classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (ACUTE) - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 1</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

History
- Date of issue mm/dd/yyyy : 03/15/2018
- Date of previous issue : Not applicable.
- Version : 1
- Prepared by : KMK Regulatory Services Inc.

Notice to reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.