SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product Identifier: (2N) 99% Silver Oxalate

Product Code: AG-OXL-02

CAS Number: 533-51-7

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements 10884 Weyburn Ave. Los Angeles, CA 90024 Tel: +1 310-208-0551 Fax: +1 310-208-0351 Emergency telephone number: Domestic, North America +1 800-424-9300 International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

HMIS RATING
Health: 0
Flammability: 0
Reactivity: 1

NFPA RATING
Health: 0
Flammability: 0
Reactivity: 1

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: Ag2C2O4
CAS: 533-51-7

SECTION 4. FIRST AID MEASURES

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious amounts of water.

**EYE EXPOSURE**

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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**SECTION 5. FIREFIGHTING MEASURES**

**EXPLOSION DATA**

FLASH POINT: N/A

AUTOIGNITION TEMP: N/A

FLAMMABILITY: N/A

**EXTINGUISHING MEDIA**

**FIREFIGHTING**

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Emits toxic fumes under fire conditions.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**PROCEDURE(S) OF PERSONAL PRECAUTION(S):**

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

**METHODS FOR CLEANING UP:**

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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**SECTION 7. HANDLING AND STORAGE**

**HANDLING**

User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**STORAGE**

Suitable: Keep container closed. Keep away from heat, sparks, and open flame. Store under nitrogen.

Special Requirements:

Air sensitive. Store under inert gas

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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS:**

Safety shower and eye bath. Mechanical exhaust required.

**PERSONAL PROTECTIVE EQUIPMENT**

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand: Protective gloves.

Eye: Chemical safety goggles.

**GENERAL HYGIENE MEASURES:**

Wash thoroughly after handling.
EXPOSURE LIMITS, RTECS:
Country, Source, Type, Value:
USA, ACGIH, TWA, 0.1 MG/M3 (METAL)
USA, MSHA, Standard-air TWA, 0.01 MG/M3
USA, OSHA, PEL 8H TWA, 0.01 MG(AG)/M3
New Zealand OEL
Remarks: check ACGIH TLV USA NIOSH TWA 0.01 MG/M3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance Physical State: Solid
Color: White
Form: Powder
Molecular Weight: 303.755 g/mol
pH: N/A
BP/BP Range: N/A
MP/MP Range: 140 ° C
Freezing Point: N/A
Vapor Pressure: N/A
Vapor Density: N/A
Saturated Vapor Conc.: N/A
SG/Density: N/A
Bulk Density: N/A
Odor Threshold: N/A
Volatile%: N/A
LVOC Content: N/A
Water Content: N/A
Solvent Content: N/A
Evaporation Rate: N/A
Viscosity: N/A
Surface Tension: N/A
Partition Coefficient: N/A
Decomposition Temp: N/A
Flash Point: N/A
Explosion Limits: N/A
Flammability: N/A
Autoignition Temp: N/A
Refractive Index: N/A
Optical Rotation: N/A
Miscellaneous Data: N/A
Solubility: N/A

SECTION 10. STABILITY AND REACTIVITY
Thermal decomposition / conditions to be avoided: Air.
Materials to be avoided: Oxygen, Strong acids, Strong bases.
Dangerous reactions: No dangerous reactions known
Dangerous products of decomposition: Silver/silver oxides.
SECTION 11. TOXICOLOGICAL INFORMATION

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

SIGNS AND SYMPTOMS OF EXPOSURE May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver). To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

CHRONIC EXPOSURE - CARCINOGEN
Species: Rat
Route of Application: Multiple Dose: 330 MG/KG
Exposure Time: 43W
Frequency: I
Result: Tumorigenic:Tumors at site or application. Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.

Species: Rat
Route of Application: Implant Dose: 2400 MG/KG
Result: Tumorigenic:Tumors at site or application. Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.

Species: Mouse
Route of Application: Implant Dose: 11 GM/KG
Result: Tumorigenic:Tumors at site or application. Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.

Species: Rat
Route of Application: Implant Dose: 2570 MG/KG
Result: Tumorigenic:Tumors at site or application. Tumorigenic:Equivocal tumorigenic agent by RTECS criteria.

SECTION 12. ECOLOGICAL INFORMATION

General notes:
Do not allow material to be released to the environment without official permits.

SECTION 13. DISPOSAL CONSIDERATIONS

Product:
Recommendation
Consult official regulations for proper disposal.
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.

Uncleaned packagings:
Recommendation:
Disposal must be made according to official regulations.

SECTION 14. TRANSPORT INFORMATION

Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)
ADR/RID-GGVS/E Class: None

Maritime transport IMDG/GGVSea:
IMDG/GGVSea Class: None

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: None

Transport/Additional information:
Not dangerous according to the above specifications.
SECTION 15. REGULATORY INFORMATION

Designation according to EC guidelines:
Observe the normal safety regulations when handling chemicals
The product is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
National regulations
Information about limitation of use:
For use only by technically qualified individuals.
Water hazard class: Generally not hazardous for water.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2016 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.