SAFETY DATA SHEET

Date Printed: 03/28/2024
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SECTION 1. IDENTIFICATION

Product Identifier: (2N) 99% Copper(II) Selenide

Product Code: CU2-SE-02

CAS Number: 1317-41-5

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:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification
Acute toxicity - Oral Category 3
Acute toxicity - Inhalation (Dusts/Mists) Category 3
Specific target organ toxicity (repeated exposure) Category 2
Label elements
Signal word Danger
Hazard statements Toxic if swallowed
Toxic if inhaled
May cause damage to organs through prolonged or repeated exposure



Symbols/Pictograms
Precautionary Statements - Prevention Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapors/spray
Precautionary Statements - Response
Get medical advice/attention if you feel unwell
IF INHALED: Remove victim to fresh air and keep at rest in a
position comfortable for breathing
Call a POISON CENTER or doctor/physician
IF SWALLOWED: Immediately call a POISON CENTER or
doctor/physician
Rinse mouth
Precautionary Statements - Storage Store locked up Store in a well-ventilated place. Keep container tightly closed
Precautionary Statements - Disposal Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Hazards not otherwise classified (HNOC) N/A
Other Information
NFPA Rating:
Health Hazards: -
Flammability: -
Stability: -
Physical and chemical -
properties
HMIS Classification:
Health Hazards: 2
Flammability: 0
Physical: 1
Personal protection -

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 1317-41-5
Molecular Weight 142.50
Formula CuSe
Chemical Name CAS No Weight % Oral LD50 Dermal LD50 Inhalation LC50
Copper(II) selenide 1317-41-5 >98 - - -

SECTION 4. FIRST AID MEASURES

First Aid Measures
General advice Immediate medical attention is required.
Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and
continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.
Skin Contact Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation Immediate medical attention is required Remove to fresh air If not breathing, give artificial respiration Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation
Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water.
Self-protection of the first aider Use personal protective equipment as required. Avoid contact with

skin, eyes or clothing.
Most important symptoms and effects, both acute and delayed
Symptoms No data available.
Indication of any immediate medical attention and special treatment needed
Note to physicians Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media
Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the
surrounding environment.
Unsuitable Extinguishing Media None.
Specific hazards arising from the chemical
Specific hazards arising from the
chemical
No data available.
Hazardous combustion products No data available.
Explosion data
Sensitivity to Mechanical Impact No data available.
Sensitivity to Static Discharge No data available.
Protective equipment and precautions for firefighters
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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Personal precautions Use personal protective equipment as required. Keep people away from and upwind of
spill/leak.
Environmental precautions
Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
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. Cover powder spill with plastic sheet or
tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp
to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling
Advice on safe handling Avoid contact with skin, eyes or clothing. Use personal protective equipment

as required.
Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Conditions for safe storage, including any incompatibilities Conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of
children. Store at room temperature.
Incompatible materials None known based on information supplied.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure Guidelines .
Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962
(11th Cir., 1992).
Chemical Name ACGIH TLV OSHA PEL NIOSH IDLH
Copper(II) selenide
1317-41-5
TWA: 1 mg/m3 Cu dust and mist
TWA: 0.2 mg/m3 Se
TWA: 0.2 mg/m3 Se
(vacated) TWA: 0.2 mg/m3 Se
IDLH: 100 mg/m3 Cu dust and
mist IDLH: 1 mg/m3 Se
TWA: 1 mg/m3 Cu dust and mist
TWA: 0.2 mg/m3 except Selenium
hexafluoride Se
NIOSH IDLH Immediately Dangerous to Life or Health
Appropriate engineering controls
Engineering Controls Showers
Eyewash stations
Ventilation systems
Individual protection measures, such as personal protective equipment
Eye/face protection Tight sealing safety goggles.
Skin and Body Protection Wear protective gloves and protective clothing.
Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved
respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and
clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid
Appearance No data available
Odor No data available
Property Values

pH No data available
Melting point/freezing point 550 °C
Boiling point No data available
Flash point No data available
Density 5.99 g/cm3
Evaporation rate No data available
Upper flammability limits No data available
Lower flammability limit No data available
Vapor pressure No data available
Vapor density No data available
Specific gravity No data available
Water solubility No data available
Solubility in other solvents No data available
Partition coefficient No data available
Autoignition temperature No data available
Decomposition temperature No data available
Kinematic viscosity No data available
Explosive properties No data available
Oxidizing properties No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity
Vapor density No data available
N/A
Chemical stability Stable under recommended storage conditions
Possibility of Hazardous Reactions None under normal processing.
Hazardous polymerization No data available.
Conditions to avoid Extremes of temperature and direct sunlight.
Incompatible materials Strong oxidizing agents
Hazardous Decomposition Products None known based on information supplied.

SECTION 11. TOXICOLOGICAL INFORMATION

Inhalation No data available.
Eye contact No data available.
Skin Contact No data available.
Ingestion No data available.
Information on toxicological effects
Symptoms No data available.
Delayed and immediate effects as well as chronic effects from short and long-term exposure
Chronic Toxicity May cause adverse liver effects.
Target Organ Effects Eyes, Respiratory system, Kidney, Liver, Skin.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.
Chemical Name ACGIH IARC NTP OSHA
Copper(II) selenide
1317-41-5
- Group 3 - -
IARC (International Agency for Research on Cancer) Not classifiable as a human carcinogen
Numerical measures of toxicity - Product Information

Unknown acute toxicity No data available
The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 100 mg/kg
ATEmix (inhalation-dust/mist) 0.5 mg/l

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity May cause long lasting harmful effects to aquatic life
0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.
Persistence and degradability No data available.
Bioaccumulation No data available.
Mobility No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and
regulations.
Contaminated packaging Do not reuse container.
Other Information Waste codes should be assigned by the user based on the application for which the product
was used.
California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as
a hazardous waste.
Chemical Name California Hazardous Waste Status
Copper(II) selenide
1317-41-5
Toxic

SECTION 14. TRANSPORT INFORMATION

DOT
UN/ID no UN3077
Hazard Class 9
Packing Group III
Proper shipping name Environmentally hazardous substance, solid, n.o.s.
Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper(II) selenide), 9, III
Emergency Response Guide Number 171
IMDG
UN/ID no UN3077
Hazard Class 9
Packing Group III
Proper shipping name Environmentally hazardous substance, solid, n.o.s.
Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper(II) selenide), 9, III
Special Provisions 274, 335, 966, 967
EmS-No F-A, S-F
IATA
UN/ID no UN3077
Hazard Class 9

Packing Group III
Proper shipping name Environmentally hazardous substance, solid, n.o.s.
Description UN3077, Environmentally hazardous substance, solid, n.o.s. (Copper(II) selenide), 9, III

SECTION 15. REGULATORY INFORMATION

International Inventories
All of the components in the product are on the following Inventory lists
TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) South Korea (KECL): ENCS (Japan):
Chemical Name TSCA DSL NDSL EINECS ELINCS ENCS IECSC KECL PICCS AICS
Copper(II) selenide X - X X - X - X - -
X - Listed
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
US Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any
chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.
SARA 311/312 Hazard Categories
Acute health hazard No
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive hazard No
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).
Chemical Name CWA - Reportable
Quantities
CWA - Toxic Pollutants CWA - Priority Pollutants CWA - Hazardous
Substances
Copper(II) selenide
1317-41-5
X
US State Regulations
California Proposition 65
This product does not contain any Proposition 65 chemicals.
U.S. State Right-to-Know Regulations
Chemical Name New Jersey Massachusetts Pennsylvania
Copper(II) selenide
1317-41-5
X Not Listed X

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 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.