

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Copper(I) Telluride Sputtering Target

**Product Code:** CU1-TE-05-ST

**CAS Number:** 12019-52-2

**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

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## SECTION 2. HAZARDS IDENTIFICATION

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component:

Copper(I) Telluride (Cu<sub>2</sub>Te)

CAS-No:

12019-52-2

Weight:

< 100%

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## SECTION 4. FIRST AID MEASURES

Eye Contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact:

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Inhalation:

Move to fresh air. Get medical attention immediately if symptoms occur.

Ingestion:

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects:

None reasonably foreseeable.

Notes to Physician:

Treat symptomatically

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## SECTION 5. FIREFIGHTING MEASURES

Suitable Extinguishing Media: Not combustible.

Unsuitable Extinguishing Media: No information available

Flash Point: No information available

Method: No information available

Autoignition Temperature: No information available

Explosion Limits

Upper: No data available

Lower: No data available

Sensitivity to Mechanical Impact: No information available

Sensitivity to Static Discharge: No information available

Specific Hazards Arising from the Chemical:

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products:

Tellurium oxide Copper 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.

NFPA

Health: 2

Flammability: 0

Instability: 0

Physical hazards: -

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

Environmental Precautions:

Should not be released into the environment. See Section 12 for additional ecological information. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up:

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

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## **SECTION 7. HANDLING AND STORAGE**

Handling:

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage:

Keep containers tightly closed in a dry, cool and well-ventilated place.

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

Exposure Guidelines

Component:

Copper(I) Telluride (Cu<sub>2</sub>Te)

ACGIH TLV:

TWA: 1 mg/m<sup>3</sup>

TWA: 0.1 mg/m<sup>3</sup>

OSHA PEL:

(Vacated) TWA: 0.1 mg/m<sup>3</sup>

NIOSH IDLH:

IDLH: 100 mg/m<sup>3</sup>

IDLH: 25 mg/m<sup>3</sup>

TWA: 1 mg/m<sup>3</sup>

TWA: 0.1 mg/m<sup>3</sup>

Mexico OEL (TWA):

TWA: 0.1 mg/m<sup>3</sup>

Engineering Measures:

None under normal use conditions.

Personal Protective Equipment

Eye/face Protection:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection:

No protective equipment is needed under normal use conditions.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: Solid

Appearance: No information available

Odor: Odorless

Odor Threshold: No information available

pH: No information available

Melting Point/Range: No data available

Boiling Point/Range: No information available

Flash Point: No information available

Evaporation Rate: Not applicable  
Flammability (solid,gas): No information available  
Flammability or explosive limits  
Upper: No data available  
Lower: No data available  
Vapor Pressure: No information available  
Vapor Density: Not applicable  
Specific Gravity: 7.27 g/cm<sup>3</sup>  
Solubility: No information available  
Partition coefficient; n-octanol/water: No data available  
Autoignition Temperature: No information available  
Decomposition Temperature: No information available  
Viscosity: Not applicable  
Molecular Formula: Cu<sub>2</sub>Te  
Molecular Weight: 254.68

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## SECTION 10. STABILITY AND REACTIVITY

Reactive Hazard:  
None known, based on information available  
Stability:  
Stable under normal conditions.  
Conditions to Avoid:  
Incompatible products.  
Incompatible Materials:  
Strong oxidizing agents  
Hazardous Decomposition Products:  
Tellurium oxide, Copper oxides  
Hazardous Polymerization:  
Hazardous polymerization does not occur.  
Hazardous Reactions:  
None under normal processing.

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## SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity  
Product Information:  
Component Information:  
Toxicologically Synergistic Products: No information available  
Delayed and immediate effects as well as chronic effects from short and long-term exposure  
Irritation: No information available  
Sensitization: No information available  
Carcinogenicity  
Component: Copper(I) Telluride  
CAS-No: 12019-52-2  
IARC: Not listed  
NTP: Not listed  
ACGIH: Not listed  
OSHA: Not listed  
Mexico: Not listed  
Mutagenic Effects: No information available

Reproductive Effects: No information available.  
Developmental Effects: No information available.  
Teratogenicity: No information available.  
STOT - single exposure: None known  
STOT - repeated exposure: None known  
Aspiration hazard: No information available  
Symptoms / effects, both acute and delayed: No information available  
Endocrine Disruptor Information: No information available  
Other Adverse Effects: The toxicological properties have not been fully investigated.

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## **SECTION 12. ECOLOGICAL INFORMATION**

Ecotoxicity

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Persistence and Degradability: Insoluble in water may persist

Bioaccumulation/ Accumulation: No information available.

Mobility: Is not likely mobile in the environment due its low water solubility

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Disposal Methods:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT:

Not regulated

TDG:

Not regulated

IATA:

Not regulated

IMDG/IMO:

Not regulated

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## **SECTION 15. REGULATORY INFORMATION**

Component

TSCA: X

DSL: -

NDSL: X

EINECS: 234-646-1

ELINCS: -

NLP:

PICCS: -

ENCS: -

AICS: -  
IECS: -  
KECL: X  
U.S. Federal Regulations  
TSCA 12(b):  
Not applicable  
SARA 313  
Component: Copper(I) Telluride  
CAS-No: 12019-52-2  
Weight:  
< 100%  
SARA 313 - Threshold Values:  
1.0%  
CWA (Clean Water Act):  
Component: Copper(I) Telluride  
CWA - Hazardous Substances: -  
CWA - Reportable Quantities: -  
CWA - Toxic Pollutants: X  
CWA - Priority Pollutants: -  
Clean Air Act: Not applicable  
OSHA: Not applicable  
CERCLA: Not applicable  
California Proposition 65: This product does not contain any Proposition 65 chemicals  
U.S. State Right-to-Know Regulations  
Component: Copper(I) Telluride  
Massachusetts: -  
New Jersey: X  
Pennsylvania: X  
Illinois: -  
Rhode Island: X  
U.S. Department of Transportation  
Reportable Quantity (RQ): N  
DOT Marine Pollutant: N  
DOT Severe Marine Pollutant: N  
U.S. Department of Homeland Security:  
This product does not contain any DHS chemicals.  
Mexico - Grade:  
No information available

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## 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.