

Copper(I) telluride: sc-278874



The Power to Question

MATERIAL SAFETY DATA SHEET

1 Identification of substance:

Product Name: Copper(I) telluride
Catalog Number: sc-278874
Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800
Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

2 Hazards identification

Classification of the substance or mixture



GHS06 Skull and crossbones

H301 Toxic if swallowed.



GHS07

H332 Harmful if inhaled.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R20/22: Harmful by inhalation and if swallowed.

Label elements

Labelling according to EU guidelines:

Code letter and hazard designation of product:

Xn Harmful

Risk phrases:

20/22 Harmful by inhalation and if swallowed.

Safety phrases:

9 Keep container in a well-ventilated place.

36 Wear suitable protective clothing.

Hazard description:

WHMIS classification



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	2
FIRE	0
REACTIVITY	0

Health (acute effects) = 2

Flammability = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

(CAS#) Description:

Copper (I) telluride (CAS# 12019-52-2)

Identification number(s):

EINECS Number: 234-646-1

4 First aid measures

Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek immediate medical advice.

5 Firefighting measures

Extinguishing media

Suitable extinguishing agents Extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents Water

Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Toxic metal oxide fume

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed. Store at room temperature.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls/personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

Tellurium and tellurium compounds (as Te)

	mg/m ³
ACGIH TLV	0.1
Austria MAK	0.1
Belgium TWA	0.1
Denmark TWA	0.1
Finland TWA	0.1; 0.3-STEEL
France VME	0.1
Germany MAK	0.1
Korea TLV	0.1
Netherlands MAC-TGG	0.1
Norway TWA	0.1
Poland TWA	0.1; 0.03-STEEL
Sweden NGV	0.1
Switzerland MAK-W	0.1; 0.5-KZG-W
United Kingdom TWA	0.1
USA PEL	0.1

Copper

	mg/m ³
ACGIH TLV	1 (dust, mist) 0.2 (fume)
Austria MAK	1 0.1 (fume)
Belgium TWA	0.2 (fume) 1 (dust)
Denmark TWA	0.1
Finland TWA	0.2 (fume) 1 (dust)
France VME	0.1 (fume) 1 (dust) 1; 2-STEEL (dust)
Germany MAK	0.1 (fume) 1 (dust)
Hungary TWA	0.2; 0.4-STEEL (dust)
Korea TLV	1 (dust, mist) 0.2 (fume)
Netherlands MAC-TGG	1 (dust)
Norway TWA	0.05 0.1 (fume)
Poland TWA	0.1; 0.3-STEEL (fume) 1; 2-STEEL (dust)
Russia	1-STEEL (dust)
Sweden NGV	0.2 (resp. dust) 1 (total dust)
Switzerland MAK-W	0.1; 0.2-KZG-W (fume) 1; 1-KZG-W
United Kingdom TWA	0.2 (fume) 1; 2-STEEL (dust, mist) 1; 3-STEEL
USA PEL TWA	0.1 (fume) 1 (dust, mist)

Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Granules
Formula:	Cu ₂ Te
Weight:	254.68

pH-value: Not applicable.

Change in condition	
Melting point/Melting range:	1125°C (2057 °F)
Boiling point/Boiling range:	Not determined
Sublimation temperature / start:	Not determined
Flash point:	Not applicable
Flammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not applicable.
Density at 20°C (68 °F):	4.6 g/cm ³ (38.387 lbs/gal)
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Insoluble
Segregation coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
Other information	No further relevant information available.

10 Stability and reactivity

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions No dangerous reactions known

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Toxic metal oxide fume

11 Toxicological information

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Subacute to chronic toxicity:

Tellurium is converted in the body to dimethyl telluride which imparts a garlic-like odor to the breath and sweat. Heavy exposure may result in headache, drowsiness, metallic taste, loss of appetite, nausea, tremors, convulsions, and respiratory arrest. Reproductive effects in laboratory animals have been reported.

Copper compounds may be irritating to the skin, eyes and respiratory tract. They may cause metal fume fever, hemolysis of the red blood cells and injury to the liver, lungs, kidneys and pancreas. Ingestion may also cause vomiting, gastric pain, dizziness, anemia, cramps, convulsions, shock, coma and death.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

Not a hazardous material for transportation.

DOT regulations: Hazard class: None
Land transport ADR/RID (cross-border) ADR/RID class: None
Maritime transport IMDG: IMDG Class: None Marine pollutant: No
Air transport ICAO-TI and IATA-DGR: ICAO/IATA Class: None

Special precautions for user Not applicable.

Transport/Additional information: Not dangerous according to the above specifications.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Product related hazard informations:

Hazard symbols:

Xn Harmful

Risk phrases:

20/22 Harmful by inhalation and if swallowed.

Safety phrases:

9 Keep container in a well-ventilated place.

36 Wear suitable protective clothing.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Non-Domestic Substances List (NDSL).

Information about limitation of use:

For use only by technically qualified individuals.

This product contains copper and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information:

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.