

<a href="#">Copper(II) Sulfide</a>	<a href="#">Pricing &gt;</a>
<a href="#">Copper(II) Sulfide Sputtering Target</a>	<a href="#">Pricing &gt;</a>
<a href="#">Ultra Dry Copper Sulfide</a>	<a href="#">Pricing &gt;</a>

<b>Linear Formula</b>	CuS
<b>Pubchem CID</b>	14831
<b>MDL Number</b>	MFCD00016066
<b>EC No.</b>	215-271-2
<b>IUPAC Name</b>	sulfanylidencopper
<b>Beilstein/Reaxys No.</b>	N/A
<b>SMILES</b>	[S-2].[Cu+2]
<b>InchI Identifier</b>	InChI=1S/Cu.S/q+2;-2
<b>InchI Key</b>	OMZSGWSJDCOLKM-UHFFFAOYSA-N

<b>Signal Word</b>	N/A
<b>Hazard Statements</b>	N/A
<b>Hazard Codes</b>	N/A
<b>Risk Codes</b>	N/A
<b>Safety Statements</b>	N/A
<b>Transport Information</b>	N/A

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## SAFETY DATA SHEET

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### SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #1317-40-4

**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

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## **SECTION 2. HAZARDS IDENTIFICATION**

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)  
The substance is not classified according to the Globally Harmonized System (GHS).

Hazards not otherwise classified

No data available

GHS label elements

N/A

Hazard pictograms

N/A

Signal word

N/A

Hazard statements

N/A

WHMIS classification

Not controlled

Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH

FIRE

REACTIVITY

1

1

1

Health (acute effects) = 1

Flammability = 1

Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

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## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances

CAS No. / Substance Name:

1317-40-4 Copper (II) sulfide

Identification number(s):

EC number: 215-271-2

Additional information: Ampouled under argon

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## **SECTION 4. FIRST AID MEASURES**

Description of first aid measures

If inhaled:

Supply patient with fresh air. If not breathing, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

In case of skin contact:

Immediately wash with soap and water; rinse thoroughly.

Seek immediate medical advice.

In case of eye contact:

Rinse opened eye for several minutes under running water. Consult a physician.

If swallowed:

Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed

No data available

Indication of any immediate medical attention and special treatment needed

No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing agents

Extinguishing powder. Do not use water.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Hydrogen sulfide

Sulfur oxides (SO<sub>x</sub>)

Metal oxide

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the

environment without official permits.  
Methods and materials for containment and cleanup:  
Pick up mechanically.  
Prevention of secondary hazards:  
No special measures required.  
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.

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

Handling  
Precautions for safe handling  
Keep container tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Information about protection against explosions and  
fires:  
Protect from humidity and water.  
Reacts with acids forming hydrogen sulfide  
Conditions for safe storage, including any  
incompatibilities  
Requirements to be met by storerooms and  
receptacles:  
No special requirements.  
Information about storage in one common storage  
facility:  
No data available  
Further information about storage conditions:  
Keep container tightly sealed.  
Store in cool, dry conditions in well-sealed containers.  
Specific end use(s)  
No data available

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## **SECTION 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:  
Copper fume, dusts and mists (as Cu)  
mg/m<sup>3</sup>  
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 0.2 (fume); 1 (dust); 1; 2-STEL (dust)  
Germany MAK 0.1 (fume); 1 (dust)  
Hungary TWA 0.2; 0.4-STEL (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 (fume); 0.3-STEL (fume)  
Russia 1-STEL (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; 3-STEL (dusts and mist)  
USA PEL TWA 0.1 (fume); 1 (dusts and mists)  
Additional information: No data  
Exposure controls  
Personal protective equipment  
Follow typical protective and hygienic practices for handling chemicals.  
Keep away from foodstuffs, beverages and feed.  
Remove all soiled and contaminated clothing immediately.  
Wash hands before breaks and at the end of work.  
Maintain an ergonomically appropriate working environment.  
Breathing equipment:  
Use suitable respirator when high concentrations are present.  
Protection of hands:  
Impervious gloves  
Inspect gloves prior to use.  
Suitability of gloves should be determined both by material and quality, the latter of which may vary by manufacturer.  
Penetration time of glove material (in minutes): No data available  
Eye protection: Safety glasses  
Body protection: Protective work clothing.

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

Information on basic physical and chemical properties

Appearance:

Form: Solid in various forms

Color: Black

Odor: Odorless

Odor threshold: No data available.

pH: N/A

Melting point/Melting range: 103 °C (217 °F) ((trans))

Boiling point/Boiling range: 220 °C (428 °F) ((dec))

Sublimation temperature / start: No data available  
Flash point: N/A  
Flammability (solid, gas): Product is not flammable.  
Ignition temperature: No data available  
Decomposition temperature: No data available  
Autoignition: No data available.  
Danger of explosion:  
Product does not present an explosion hazard.  
Explosion limits:  
Lower: No data available  
Upper: No data available  
Vapor pressure: N/A  
Density at 20 °C (68 °F): 4.6 g/cm<sup>3</sup> (38.387 lbs/gal)  
Relative density: No data available.  
Vapor density: N/A  
Evaporation rate: N/A  
Solubility in Water (H<sub>2</sub>O): Hydrolyzes slowly  
Partition coefficient (n-octanol/water): No data available.  
Viscosity:  
Dynamic: N/A  
Kinematic: N/A  
Other information  
No data available

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## **SECTION 10. STABILITY AND REACTIVITY**

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

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

Possibility of hazardous reactions

Reacts with acids forming hydrogen sulfide

Conditions to avoid

No data available

Incompatible materials:

Oxidizing agents

No data available

Hazardous decomposition products:

Sulfur dioxide

Hydrogen sulfide

Metal oxide fume

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on toxicological effects

Acute toxicity: No effects known.

LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: May cause irritation

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.

Carcinogenicity:

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

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity:

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. Copper solutions may cause sensitization reactions.

Subacute to chronic toxicity: No effects known.

Additional toxicological information:

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

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## **SECTION 12. ECOLOGICAL INFORMATION**

Toxicity

Aquatic toxicity:

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Additional ecological information:

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

Avoid transfer into the environment.

Results of PBT and vPvB assessment

PBT: N/A

vPvB: N/A

Other adverse effects

No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods

Recommendation

Consult official regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation:

Disposal must be made according to official regulations.

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## **SECTION 14. TRANSPORT INFORMATION**

Not a hazardous material for transportation.

UN-Number

DOT, IMDG, IATA

None

UN proper shipping name

DOT, IMDG, IATA

None

Transport hazard class(es)

DOT, ADR, IMDG, IATA

Class

None

Packing group

DOT, IMDG, IATA

None

N/A

Special precautions for user

N/A

Transport in bulk according to Annex II of  
MARPOL73/78 and the IBC Code

N/A

Transport/Additional information:

Not dangerous according to the above specifications.

DOT

Marine Pollutant (DOT):

No

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## **SECTION 15. REGULATORY INFORMATION**

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

GHS label elements: N/A

Hazard pictograms: N/A

Signal word: N/A

Hazard statements: N/A

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 Domestic Substances List (DSL).  
SARA Section 313 (specific toxic chemical listings)  
1317-40-4 Copper (II) sulfide  
California Proposition 65  
Prop 65 - Chemicals known to cause cancer  
Substance is not listed.  
Prop 65 - Developmental toxicity  
Substance is not listed.  
Prop 65 - Developmental toxicity, female  
Substance is not listed.  
Prop 65 - Developmental toxicity, male  
Substance is not listed.  
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.  
Other regulations, limitations and prohibitive  
regulations  
Substance of Very High Concern (SVHC) according to  
the REACH Regulations (EC) No. 1907/2006.  
Substance is not listed.  
The conditions of restrictions according to Article 67  
and Annex XVII of the Regulation (EC) No 1907/2006  
(REACH) for the manufacturing, placing on the market  
and use must be observed.  
Substance is not listed.  
Annex XIV of the REACH Regulations (requiring  
Authorisation for use)  
Substance is not listed.  
Chemical safety assessment:  
A Chemical Safety Assessment has not been carried  
out.

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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  
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