

# **MATERIAL SAFETY DATA SHEET**

CUPRIC SULFIDE  
CAROLINA BIOLOGICAL

Revised: 11/23/09  
Replaces: 11/23/09  
Printed: 07/13/10

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## **1. PRODUCT DESCRIPTION**

Product Name: Cupric Sulfide  
Product Code(s): 85-6614  
Size: 100 g  
Chemical Name: See Section 2  
CAS Number: 1317-40-4  
Formula: CuS  
Synonyms: Indigo Copper, Copper (II) Sulfide  
Distributor: Carolina Biological Supply Company  
2700 York Road  
Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)  
Chemtrec (Transportation Spill Response 24 hours): 800-424-9300

## **2. COMPOSITION/INFORMATION ON INGREDIENTS**

Principal Hazardous Components: Cupric Sulfide (CAS#1317-40-4) 100%  
TLV and PEL units: ACGIH-TLV 1 mg(Cu)/m3 (TWA), as copper  
OSHA-PEL 1 mg(Cu)/m3 (TWA), as copper

## **3. HAZARD IDENTIFICATION**

Emergency Overview: WARNING! May be harmful if swallowed or inhaled.  
Causes irritation to skin and eyes. Contact with acids liberates hydrogen sulfide-a toxic gas.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

## **4. FIRST AID MEASURES**

Emergency and First Aid Procedures:

Eyes - Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.

Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

Ingestion - If swallowed, if conscious, give some water. Do not induce vomiting unless and until directed by medical personnel. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Inhalation - Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm and quiet, and get medical attention.

## **5. FIREFIGHTING PROCEDURES**

Flash Point(Method Used): Non-flammable

NFPA Rating: Health: 2

Fire: 0

Reactivity: 0

Extinguisher Media:

Use dry chemical, CO2 or appropriate foam.

Flammable Limits in Air % by Volume: No information available

Autoignition Temperature: No information available

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### Special Firefighting Procedures:

Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Contact with strong acids liberates flammable, explosive and very toxic hydrogen sulfide (H<sub>2</sub>S) gas.

### **6. SPILL OR LEAK PROCEDURES**

Steps to be Taken in Case Material is Released or Spilled:

Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

### **7. SPECIAL PRECAUTIONS**

Precautions to be Taken in Handling or Storing: Store in a cool, dry place away from acids.

Other Precautions: Hydrogen Sulfide gas (H<sub>2</sub>S) deadens the sense of smell.

Do not depend on odor to detect presence of gas. Avoid contact with skin and eyes. Use adequate ventilation. Remove and wash contaminated clothing.

### **8. SPECIAL PROTECTION INFORMATION**

Respiratory Protection(Specify Type):

None needed under normal conditions of use with adequate ventilation.

NIOSH approved equipment should be worn if PELs are exceeded.

Ventilation:

Local Exhaust: Preferred

Mechanical(General): Acceptable

Special: No

Other: No

Protective Gloves:

Rubber, neoprene, PVC, or equivalent.

Eye Protection:

Splash proof chemical safety goggles should be worn at all times.

Other Protective Clothing or Equipment:

Lab apron, eye wash, and safety shower.

### **9. PHYSICAL DATA**

Molecular Weight: 95.60

Melting Point: Transition @103°C (217°F)

Boiling Point: Decomposes at 220°C (428°F)

Vapor Pressure: Negligible as solid

Vapor Density(Air=1): Unknown

Specific Gravity(H<sub>2</sub>O=1): 4.76

Percent Volatile by Volume: Not applicable

Evaporation Rate(H<sub>2</sub>O=1): Not applicable

Solubility in Water: Insoluble

Appearance and Odor: Black crystalline powder or crystals; no odor

### **10. REACTIVITY DATA**

Stability: Stable

Conditions to Avoid: Oxidized to Cupric Sulfate (CuSO<sub>4</sub>) in moist air.

Incompatibility(Materials to Avoid): Strong acids.

Hazardous Decomposition Products: Contact with strong acids liberates

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hydrogen sulfide (H<sub>2</sub>S) a toxic gas. Thermal decomposition, emits toxic fumes of sulfur (SO<sub>2</sub>).

Hazardous Polymerization: Will not occur

### **11. TOXICITY DATA**

Toxicity Data: No information available

Effects of Overexposure: Harmful if swallowed. May cause irritation to gastrointestinal tract, abdominal pain, nausea, vomiting, diarrhea and gastritis. Contact with skin and eyes may cause irritation, redness, pain.

Inhalation of copper salts causes irritation of the respiratory tract with occasional ulceration and perforation of the nasal septum.

Acute: See section 3

Chronic: No information available

Conditions Aggravated by Overexposure:

Target Organs: No information available

Primary Route(s) of Entry: No information available

### **12. ECOLOGICAL DATA**

EPA Waste Numbers: None

### **13. DISPOSAL INFORMATION**

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations.

Always contact a permitted waste disposer (TSD) to assure compliance.

### **14. TRANSPORT INFORMATION**

Not regulated for transport

### **15. REGULATORY INFORMATION**

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313 Chemicals		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name	Chemical List Category		
Cupric Sulfide	No	No	Copper Cpds	No	No

### **16. ADDITIONAL INFORMATION**

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH.....American Conference of Governmental Industrial Hygienists

CAS Number..Chemical Abstracts Service Number

CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act

DOT.....U.S. Department of Transportation

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IARC.....International Agency of Research on Cancer  
mppcf.....million particles per cubic foot  
N/A.....Not Available  
NTP.....National Toxicology Program  
OSHA.....Occupational Safety and Health Administration  
PEL.....Permissible Exposure Limit  
ppm.....parts per million  
RCRA.....Resource Conservation and Recovery Act  
SARA.....Superfund Amendments and Reauthorization Act  
TLV.....Threshold Limit Value  
TSCA.....Toxic Substances Control Act