

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name            Cupric oxide  
CAS number             1317-38-0  
Synonyms                Copper(II) oxide

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses            Reagent, chemical precursor, absorbent.

#### 1.3 Details of the supplier of the safety data sheet

Company                    Lab Alley, LLC  
                                  12501 Pauls Valley Road  
                                  Austin, Texas 78737  
                                  U.S.A.  
  
Telephone                 512-668-9918  
Fax                            512-886-4008

#### 1.4 Emergency telephone

**Emergency Phone #**            US & Canada: 1-800-535-5053            INFOTRAC  
  International 1-352-323-3500            INFOTRAC

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Aquatic Acute Hazard            Category 1  
Aquatic Chronic Hazard         Category 3

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard statements

Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statements

If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use. Avoid release to the environment. Collect spillage. Dispose of contents and container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No information available.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Cupric Oxide	Copper(II) oxide	1317-38-0	100%

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

#### If inhaled

Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Loosen clothing and place exposed in a comfortable position. Seek medical assistance if cough or other symptoms appear.

#### In case of skin contact

Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

#### In case of eye contact

Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Seek medical attention if irritation persists or concerned.

#### If swallowed

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention if irritation, discomfort, or vomiting persists.

### 4.2 Most important symptoms and effects, both acute and delayed

Irritation, shortness of breath, headache, nausea, dizziness.

### 4.3 Indication of any immediate medical attention and special treatment needed

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** Use means suitable to extinguishing surrounding fire.

**Unsuitable extinguishing media** No information available.

### 5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. Copper oxides.

### 5.3 Special protective equipment and precautions for firefighters

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

### 5.4 Further information

**Flash Point** No information available.

**Autoignition Temperature** No information available.

#### Explosion limits

**Upper** No information available.

**Lower** No information available.

**Sensitivity to Mechanical Impact** No information available.

**Sensitivity to Static Discharge** No information available.

#### NFPA

Health	Flammability	Instability	Physical hazards
2	0	0	N/A

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Ensure that air-handling systems are operational.

### 6.2 Environmental precautions

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

### 6.3 Methods and materials for containment and cleaning up

Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulation. If necessary, use trained response staff or contractor. Evacuate personnel to safe areas.

Containerise for disposal. Refer to Section 13. Keep in suitable closed containers for disposal.

Pick up and arrange disposal without creating dust. Sweep up and shovel. Avoid dust generation.

### 6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Precautions on safe handling

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid dust generation. Use with adequate ventilation.

#### Hygiene measures

Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before reworking wash contaminated clothing.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials. Keep in a dry place.

#### Incompatibilities

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Cupric oxide	PEL TWA	0.1 mg/m <sup>3</sup>
	PEL TWA	1 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

No information available.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Cupric oxide	PEL TWA	0.1 mg/m <sup>3</sup>

#### Biological occupational exposure limits

### 8.2 Exposure controls

#### Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits - OELs) indicated above.

## Personal protective equipment

### Eye/face protection

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Safety glasses or goggles are appropriate eye protection.

### Skin and body protection

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

### Respiratory protection

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

### Control of environmental exposure

No information available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	Black
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	1326 °C / 2418.80 °F
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Density	6.315

Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	CuO
Molecular Weight	79.545
VOC Content(%)	No information available
Oxidizing properties	No information available

## 9.2 Other safety information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Nonreactive under normal conditions.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

None under normal processing. Forms explosive acetylides with acetylene in caustic solutions. Exposure to moist air at >212 °F can result in spontaneous combustion. Explodes when heated with powdered aluminuml anilinium perchlorate; hydrogen; magnesium; phthalic anhydride.

### 10.4 Conditions to avoid

Incompatible materials.

### 10.5 Incompatible materials

Reducing agents, hydrogen sulfide gas, aluminum, alkali metals, powdered metals.

### 10.6 Hazardous decomposition products

Copper fumes.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

#### Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cupric oxide	>2500 mg/kg (rat)	>2000 mg/kg (rabbit)	-

#### Skin corrosion/irritation

No information available

**Serious eye damage/eye irritation**

No information available

**Respiratory or skin sensitization**

No information available

**Germ cell mutagenicity**

No information available

**Carcinogenicity**

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Cupric oxide	1317-38-0	Not listed	Not listed	Not listed	Not listed	Not listed

**Specific target organ toxicity - single exposure**

None known

**Specific target organ toxicity - repeated exposure**

None known

**Reproductive toxicity**

No information available

**Chronic effects**

No information available

**11.2 Additional Information**

No information available

**SECTION 12: Ecological information****12.1 Toxicity**

Product		Species	Test Results
Cupric oxide	LC50	Oncorhynchus mykiss	0.19 - 0.21 mg/l 96 h
	EC50	Daphnia magna	0.011 - 0.039 mg/l 48 h

**12.2 Persistence and degradability**

The methods for determining the biological degradability are not applicable to in

**12.3 Bio accumulative potential**

No information available

**12.4 Mobility in soil**

No information available

**12.5 Results of PBT and vPvB assessment**

No information available

## 12.6 Endocrine disrupting properties

No information available

## 12.7 Other adverse effects

No information available.

## SECTION 13: Disposal considerations

### 13.1 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.

## SECTION 14: Transport information

### DOT (US)

Not regulated

### IMDG

Not regulated

### IATA

Not regulated

## SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Listed

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed

### SARA 304 Emergency release notification

Not regulated

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312 Hazardous



Not listed.

**SARA 313 (TRI reporting)**

Listed

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Not regulated

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Not listed

**US state regulations**

**US. Massachusetts RTK - Substance List**

Not listed

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed

**California Proposition 65**

Not listed

**SECTION 16: Other information**

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**SECTION 17: Disclaimer**

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.