



# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 02/03/2015

Version 1.2

## SECTION 1. Identification

### Product identifier

Product number	102764
Product name	Copper(II) oxide granular for elementary analysis
CAS-No.	1317-38-0

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

Identified uses	Reagent for analysis
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### Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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## SECTION 2. Hazards identification

### GHS Classification

Acute toxicity, Category 4, Oral, H302

For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS-Labeling

*Hazard pictograms*



*Signal Word*  
Warning

*Hazard Statements*  
H302 Harmful if swallowed.

*Precautionary Statements*  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

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P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.  
P330 Rinse mouth.  
P501 Dispose of contents/ container to an approved waste disposal plant.

## Other hazards

None known.

## SECTION 3. Composition/information on ingredients

Formula CuO (Hill)  
Molar mass 79.55 g/mol

### Hazardous ingredients

*Chemical Name (Concentration)*

CAS-No.

*copper(II) oxide ( $\geq 90\%$  -  $\leq 100\%$ )*

1317-38-0

Exact percentages are being withheld as a trade secret.

## SECTION 4. First aid measures

### Description of first-aid measures

*Inhalation*

After inhalation: fresh air.

*Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

*Eye contact*

After eye contact: rinse out with plenty of water.

*Ingestion*

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

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

irritant effects, conjunctivitis, Pain, Diarrhea, Vomiting, CNS disorders

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

No information available.

## SECTION 5. Fire-fighting measures

### Extinguishing media

*Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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## Special hazards arising from the substance or mixture

Not combustible.

## Advice for firefighters

*Special protective equipment for fire-fighters*

In the event of fire, wear self-contained breathing apparatus.

*Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

### Environmental precautions

Do not empty into drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

### Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.

Storage temperature: no restrictions.

## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

*Ingredients*

Basis	Value	Threshold limits	Remarks
<i>copper(II) oxide 1317-38-0</i>			
NIOSH/GUIDE	Recommended exposure limit (REL):	0.1 mg/m <sup>3</sup>	Form of exposure: Fume. Expressed as: as Cu

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

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## Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### *Hygiene measures*

Change contaminated clothing. Wash hands and face after working with substance.

### *Eye/face protection*

Safety glasses

### *Hand protection*

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

### *Other protective equipment:*

protective clothing

### *Respiratory protection*

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## SECTION 9. Physical and chemical properties

Physical state	solid
Color	black
Odor	odorless
Odor Threshold	No information available.
pH	ca. 7 at 50 g/l 68 °F (20 °C) (slurry)
Melting point	1,326 °C (decomposition)
Boiling point/boiling range	Not applicable
Flash point	does not flash
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable

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Vapor pressure	No information available.
Relative vapor density	No information available.
Density	6.48 g/cm <sup>3</sup> at 77 °F (25 °C)
Relative density	No information available.
Water solubility	at 68 °F (20 °C) insoluble
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	No information available.
Decomposition temperature	> 1,879 °F (> 1,026 °C)
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Oxidizing properties	No information available.
Ignition temperature	Not applicable
Bulk density	ca.500 kg/m <sup>3</sup>

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### SECTION 10. Stability and reactivity

#### Reactivity

See below

#### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

#### Possibility of hazardous reactions

Risk of explosion with:

Aluminum

Violent reactions possible with:

Boron, hydrazine and derivatives, hydroxylamine, sodium, magnesium

Risk of ignition or formation of inflammable gases or vapors with:

hydrogen sulfide, Fluorine, silane, hydrides

Potassium

Acid anhydrides

Hydrogen

#### Conditions to avoid

no information available

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### Incompatible materials

no information available

### Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### Information on toxicological effects

#### *Likely route of exposure*

Inhalation, Eye contact, Skin contact, Ingestion

#### *Target Organs*

Eyes

Skin

Respiratory system

#### *Acute oral toxicity*

LD50 Rat: 470 mg/kg (RTECS)

absorption

Symptoms: Possible damages:, Vomiting, Pain, Diarrhea

#### *Acute inhalation toxicity*

Symptoms: Irritation symptoms in the respiratory tract.

#### *Skin irritation*

Possible damages: slight irritation

#### *Eye irritation*

Possible damages: slight irritation conjunctivitis

#### *Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

#### *Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

### Carcinogenicity

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### Further information

After absorption:

Systemic effects:

CNS disorders

Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### Ecotoxicity

#### *Toxicity to fish*

LC50 *Oncorhynchus mykiss* (rainbow trout): 25 mg/l; 96 h (above the solubility limit in the test medium) (ECOTOX Database)

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 0.04 mg/l; 48 h (above the solubility limit in the test medium) (ECOTOX Database)

### Persistence and degradability

#### *Biodegradability*

The methods for determining the biological degradability are not applicable to inorganic substances.

### Bioaccumulative potential

No information available.

### Mobility in soil

No information available.

#### *Additional ecological information*

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

UN number UN 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER(II) OXIDE)

Class 9

Packing group III

Environmentally hazardous --

### Air transport (IATA)

UN number UN 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER(II) OXIDE)

Class 9

Packing group III

Environmentally hazardous --

Special precautions for user no

### Sea transport (IMDG)

UN number UN 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (COPPER(II) OXIDE)

Class 9

Packing group III

Environmentally hazardous --

Special precautions for user yes

EmS F-A S-F

## SECTION 15. Regulatory information

### United States of America

#### SARA 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

#### *Ingredients*

copper(II) oxide	1317-38-0	100 %
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#### SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.



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## Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

## DEA List I

Not listed

## DEA List II

Not listed

## US State Regulations

### Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

### New Jersey Right To Know

*Ingredients*

copper(II) oxide

### California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

## Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

KOREA: Not in compliance with the inventory

## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

### Labeling

*Hazard pictograms*



*Signal Word*

Warning

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### *Hazard Statements*

H302 Harmful if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

### *Precautionary Statements*

Prevention

P273 Avoid release to the environment.

### **Full text of H-Statements referred to under sections 2 and 3.**

H302 Harmful if swallowed.

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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