

SAFETY DATA SHEET

Preparation Date: 8/3/2017

Revision Date: 7/3/2018

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: C1415
Product Name: CUPRIC OXIDE, POWDERED, BLACK, REAGENT, ACS

Other means of identification

Synonyms: Black copper oxide
 C.I. 77403
 C.I. Pigment Black 15
 Copper Brown
 Copper monooxide
 Copper monoxide
 Copper(2+) oxide
 Copper(II) oxide

CAS #: 1317-38-0
RTECS # GL7900000
CI#: 77403

Recommended use of the chemical and restrictions on use

Recommended use: Pigment. Catalyst. Feed additive. Wood preservation. Coloring agent in chinaware, porcelains, enamels, glass.

Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2B
Specific target organ toxicity (single exposure)	Category 3

Label elements

Warning**Hazard statements**

Harmful if swallowed
Causes eye irritation
May cause respiratory irritation

**Hazards not otherwise classified (HNOC)**

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Cupric Oxide	1317-38-0	100

4. FIRST AID MEASURES**First aid measures****General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. If skin irritation persists, call a physician.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms Causes eye irritation
Mild eye irritation
Irritating to respiratory system
May cause coughing and shortness of breath
Dyspnea (Difficulty breathing and shortness of breath)
Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea
May cause metallic taste
May affect the liver
It may affect the kidneys
Hypotension
Weak, rapid pulse or rapid heart rate (Tachycardia)
May cause hemolytic anemia
Ingestion of larger amounts may cause effects to the central nervous system (e.g. dizziness, headache)
Convulsions

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: No information available.

Specific hazards: The product is not flammable. This material is an inorganic dust/powder and will not create nor support conditions that would result in a dust explosion or fire.

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sewers, waterways, and/or ground water. Prevent product from entering drains. Do not let this chemical enter the environment.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Use only in well-ventilated areas. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Avoid dust formation. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents
Powdered metals
Metals
Aluminum
Alkali Metals
Potassium
Sodium
Alkaline Earth metals
Magnesium sulfate
Hydrogen Sulfide
Hydrogen
Hydrazine
Acetylene
Boron
Pospham
Titanium
Manganese dioxide
Acetylene carbide

Dirubidum acetylide
 Sodium hypobromite
 Barium acetate
 Phthalic anhydride

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Cupric Oxide	1317-38-0	None	0.1 mg/m ³ TWA (fume, as Cu) 1 mg/m ³ (dust and mist, as Cu)	1 mg/m ³ TWA as Cu	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Cupric Oxide	1317-38-0	None	None	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Cupric Oxide	1317-38-0	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Safety glasses Safety glasses with side-shields

Skin and body protection: Long sleeved clothing
 Chemical resistant apron
 Gloves

Respiratory protection: Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Powder.	Color: Black. Brownish-black.
Odor: Odorless.	Taste No information available.	Formula: CuO
Molecular/Formula weight: 79.55	Flammability: No information available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not applicable	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 1326°C/2419°F (dec)	Decomposition temperature(°C/°F): 1026-1226 °C/1879-2239 °F
Boiling point/range(°C/°F): 1026°C/1879°F (dec)	Bulk density: 1.25 g/L	Density (g/cm3): 6.32
Specific gravity: No information available	pH: No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Practically insoluble in water Soluble in acids Insoluble in water Practically insoluble in alcohol Soluble in dilute acids Soluble in alkali cyanides Soluble in ammonium carbonate	

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents

Reactive with powdered metals, metals (aluminum, alkali, alkaline), hydrogen sulfide, acetylene, metal oxides, magnesium sulfate, hydrazine

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Avoid dust formation. Incompatible materials.

Incompatible Materials: Oxidizing agents
Powdered metals
Metals
Aluminum
Alkali Metals

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Potassium
Sodium
Alkaline Earth metals
Magnesium sulfate
Hydrogen Sulfide
Hydrogen
Hydrazine
Acetylene
Boron
Pospham
Titanium
Manganese dioxide
Acetylene carbide
Dirubidum acetylide
Sodium hypobromite
Barium acetate
Phthalic anhydride

Hazardous decomposition products: Copper fumes. Copper oxides.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Inhalation. Ingestion.

Acute Toxicity

Component Information

Cupric Oxide
CAS-No. 1317-38-0

LD50/oral/rat = 470 mg/kg (RTECS)
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 470 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit

Product code: C1415

Product name: CUPRIC OXIDE,
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VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation. It may cause mild skin irritation.

Eye Contact: Causes eye irritation. Mild eye irritation.

Inhalation May cause respiratory tract irritation. Inhalation of Cupric oxide fumes may cause Metal Fume Fever, a flu-like condition with symptoms including fever, chills, sweating, muscle aches and pains, weakness, difficulty breathing, and cough.

Ingestion Harmful if swallowed. May cause digestive (gastrointestinal) tract irritation. May cause abdominal pain, nausea, vomiting, diarrhea. May cause metallic taste. May affect liver. May affect urinary system (kidneys). May affect the cardiovascular system (hypotension). May affect the cardiovascular system (tachycardia). May cause hemolytic anemia. May affect behavior/central nervous system (dizziness, headache). May affect behavior/central nervous system (convulsions/seizures). May affect respiration (difficult or labored breathing resulting in shortness of breath).

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Prolonged or repeated ingestion may cause nausea, vomiting, diarrhea. Prolonged or repeated ingestion may affect the liver, and kidneys.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Cupric Oxide	1317-38-0	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: Kidneys. Liver.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Cupric Oxide - 1317-38-0

Freshwater Fish Species Data: 0.19-0.21 mg/L LC50 Oncorhynchus mykiss 96h
 25.4 mg/L LC50 Oncorhynchus mykiss 96h
 0.31 mg/L LC50 Morone saxatilis 48h

Water Flea Data: 0.011-0.039 mg/L EC50 Daphnia magna 48h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
 Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
 Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Cupric Oxide	1317-38-0	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available

Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No Information available
Description: No information available

ADR
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available

IMO / IMDG
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

ICAO
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions No information available

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines	Japan ENCS	CHINA	Australia	EINECS-No.
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				(PICCS)			(AICS)	
Cupric Oxide	1317-38-0	PresentACTIVE	Present KE-08942	Present	Present (1)-297	Present	Present	Present 215-269-1

U.S. Regulations

Cupric Oxide

New Jersey RTK Hazardous Substance List: sn 2215 (copper compounds)

New Jersey (EHS) List: sn 2215 500 lb TPQ (copper compounds)

New Jersey - Discharge Prevention - List of Hazardous Substances: Present (copper compounds)

Pennsylvania RTK: Environmental Hazard (copper compounds)

Pennsylvania RTK - Environmental Hazard List Present (copper compounds)

Louisiana Reportable Quantity List for Pollutants: 100 lb RQ (copper compounds)

California Directors List of Hazardous Substances: Present (except Copper phthalocyanine crudes and pigments)

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Cupric Oxide	1317-38-0	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Cupric Oxide	1317-38-0	None	None	None	Copper compounds	1.0% de minimis concentration

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Cupric Oxide	1317-38-0	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: Not a dangerous product according to HPR classification criteria.

Component
Cupric Oxide
1317-38-0 (100)

WHMIS 2015 Hazard Classification
Not a dangerous product according to HPR classification criteria

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

Non-controlled

Components

WHMIS 1988

Product code: C1415

Product name: CUPRIC OXIDE,
POWDERED, BLACK, REAGENT, ACS

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Cupric Oxide

Uncontrolled product according to WHMIS classification criteria

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Cupric Oxide	1%

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Cupric Oxide	1317-38-0	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Cupric Oxide	1317-38-0	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Cupric Oxide	1317-38-0	Not listed

EU Classification**EU GHS - SV - CLP 1272/2008**

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Cupric Oxide	1317-38-0	Hazardous to aquatic environment - acute hazard - Aquatic Acute 1: H400 Very toxic to aquatic life. (M Factor: 100); Hazardous to aquatic environment - chronic hazard - Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects. (M Factor: 100)029-016-00-6

EU - CLP (1272/2008)**R-phrase(s)**

R22 - Harmful if swallowed.

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S -phrase(s)

S29 - Do not empty into drains.

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

S46 - If swallowed, seek medical advice immediately and show this container or label.

S 1/2 - Keep locked up and out of the reach of children.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Cupric Oxide	1317-38-0		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC**Indication of danger:**

Xn - Harmful.

N - Dangerous for the environment.

Xn**N****16. OTHER INFORMATION**

Preparation Date: 8/3/2017
Revision Date: 7/3/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet