

1. Identification

Product identifier	Copper Oxide Wire
Other means of identification	
SDS number	01475
Part Number	502-190
Recommended use	Not available.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Supplier	
Company name	LECO Corporation
Address	3000 Lakeview Avenue St. Joseph, MI 49085 United States
Telephone	269-983-5531
Website	www.leco.com
E-mail	info@leco.com
Emergency phone number	Chemtrec: 800-424-9300 Chemtrec Int'l: 703-527-3887

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Warning
Hazard statement	Harmful if swallowed. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Avoid breathing dust. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment.
Response	If swallowed: Call a poison center/doctor if you feel unwell. Collect spillage.
Storage	Store in a dry place. Store in a closed container.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
COPPER (II) OXIDE		1317-38-0	> 99
DICOPPER OXIDE		1317-39-1	in small quantities

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and plenty of water. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions.
Most important symptoms/effects, acute and delayed	Not available.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Wear suitable protective equipment. Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up.
Methods and materials for containment and cleaning up	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Sweep up or vacuum up spillage and collect in suitable container for disposal.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not get in eyes, on skin, on clothing. Avoid breathing dust. Avoid prolonged exposure. Practice good housekeeping. Wash hands thoroughly after handling. Avoid release to the environment.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. hygroscopic.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
COPPER (II) OXIDE (CAS 1317-38-0)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
DICOPPER OXIDE (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value	Form
Copper Oxide Wire	TWA	1 mg/m3	Dust and mist.
Components	Type	Value	Form
COPPER (II) OXIDE (CAS 1317-38-0)	TWA	0.1 mg/m3	Fume.
DICOPPER OXIDE (CAS 1317-39-1)	TWA	1 mg/m3	Dust and mist.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear suitable gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state	Solid.
Form	Powder.
Color	Black.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure	Not available.
Vapor density	Not available.
Relative density	6.48 g/cm ³ (20°C) estimated

Material name: Copper Oxide Wire

SDS No. 01475 Version #: 02 Revision date: 08-27-2015 Issue date: 08-27-2014

SDS US

3 / 8

Solubility(ies)	
Solubility (water)	insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	500 kg/m3

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Not available.
Possibility of hazardous reactions	Risk of explosion when in contact with metal powder, potassium, hydrogen, phthalic anhydride.
Conditions to avoid	Moisture. Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible materials	Boron; hydrazine; magnesium; sodium; dichloromethylsilane; fluorine; hydrogen sulfide; strontium hydride; hydroxylamine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Ingestion	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity Harmful if swallowed.

Components	Species	Test Results
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DICOPPER OXIDE (CAS 1317-39-1)

Acute

Oral

LD50	Rat	0.47 g/kg
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* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Not available.

Serious eye damage/eye irritation Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Not available.

Germ cell mutagenicity Not available.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not available.

Reproductive toxicity	Not available.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Mutations/damages of the respiratory system, respiratory dysfunction, damages on nerves, blood, live, kidneys, digestive system. Greenish-black discoloration of skin and hair. Metal fume fever in case of inhalation of fumes.

12. Ecological information

Ecotoxicity Not available.

Components		Species	Test Results
COPPER (II) OXIDE (CAS 1317-38-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	0.011 - 0.039 mg/l, 48 hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	> 56000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

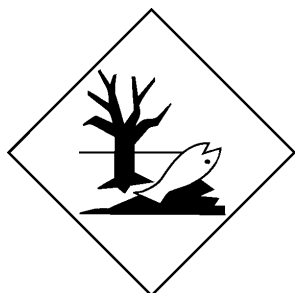
UN number	UN3077
UN proper shipping name	Environmentally hazardous substances, solid, n.o.s. (Copper oxide), MARINE POLLUTANT
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.(Copper oxide)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Copper oxide), MARINE POLLUTANT

Transport hazard class(es)**Class** 9**Subsidiary risk** -**Packing group** III**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**DOT; IATA; IMDG****Marine pollutant****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)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

COPPER (II) OXIDE (CAS 1317-38-0)

Listed.

DICOPPER OXIDE (CAS 1317-39-1)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**Hazard categories**

Immediate Hazard - Yes

Delayed Hazard - Yes

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
COPPER (II) OXIDE	1317-38-0	> 99
DICOPPER OXIDE	1317-39-1	in small quantities

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.

Clean Water Act (CWA) Priority pollutant
Section 112(r) (40 CFR Toxic pollutant
68.130)

Safe Drinking Water Act 1.3 mg/l
(SDWA) 1.3 mg/l

US state regulations**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

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

COPPER (II) OXIDE (CAS 1317-38-0)

DICOPPER OXIDE (CAS 1317-39-1)

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

Not listed.

US. Rhode Island RTK

COPPER (II) OXIDE (CAS 1317-38-0)

DICOPPER OXIDE (CAS 1317-39-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 08-27-2014
Revision date 08-27-2015
Version # 02
HMIS® ratings Health: 2*
 Flammability: 0
 Physical hazard: 2
 *** Represents a chronic hazard.
NFPA ratings Health: 2
 Flammability: 0
 Instability: 2

Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text. Supplier cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.