

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****COMPANY ADDRESS:**

ALBAUGH, LLC  
Ankeny, IA 50021

**EMERGENCY TELEPHONE NUMBERS:**

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call  
CHEMTREC Day or Night

- Within USA and Canada: 1-800-424-9300 CCN771
- Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

**PRODUCT NAME**

: COP O ZINC

**CHEMICAL NAME**

: Basic copper sulfate and zinc oxide

**PRODUCT USE**

: Fungicide

**PRODUCT CODE**

: EPA Reg. No 45002-21

**SECTION 2 - HAZARDS IDENTIFICATION SUMMARY**

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

Light green granular powder

**HEALTH HAZARDS:** Causes severe eye irritation.**PHYSICAL HAZARDS:** Can decompose at high temperatures forming toxic gases.**ENVIRONMENTAL HAZARDS:** May be harmful to aquatic species.**SECTION 3 - COMPOSITION, INFORMATION OF INGREDIENTS**

COMPONENT	PERCENTAGE	CAS NUMBER
Basic copper sulfate (as metallic Cu)	44.48 (25.0)	1344-73-6
Zinc oxide (as metallic Zn)	31.0 (25.0)	1314-13-2
Other components	24.52	N/A

**SECTION 4 - FIRST AID MEASURES**

First Aid responders should use protective equipment in Section 8 if there is a potential for exposure to product.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**IF INHALED:** Move person to fresh air, if person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

**NOTE TO PHYSICIAN:** No known antidote, treat symptomatically.

Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

**SECTION 5 - FIRE FIGHTING MEASURES**

National Fire Protection Rating (NFPA)

HEALTH	2
FLAMMABILITY	0
REACTIVITY	1
4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

**FLASHPOINT:** Not applicable

**EXTINGUISHING MEDIA:** Proper to primary cause of fire. Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

**FIRE OR EXPLOSION HAZARDS:** Can burn in fire, releasing irritating and toxic gases due to thermal decomposition or combustion.

**FIRE FIGHTING INSTRUCTIONS:** Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Foam or dry chemical fire extinguishing system is preferred to prevent excessive water runoff.

Minimize use of water to prevent environmental contamination. Contact your State Pesticide or Environmental Control Agency, or nearest EPA Regional Office for guidance on disposal.

**FIRE FIGHTING EQUIPMENT:** If Copper Basic Sulfate is involved in a fire, avoid breathing smoke. Use a positive-pressure, self-contained breathing air supply.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**IN CASE OF SPILLS OR LEAKS:** Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**SMALL SPILL:** Vacuum or sweep up material and place in a container for reuse or disposal.

**LARGE SPILL:** Avoid creating dust cloud. Vacuum or sweep up material and place in a container for reuse or disposal. Reduce airborne dust and prevent scattering by moistening with water. Pick up wash liquid with additional absorbent and place in a disposable container. After removal, flush contaminated area thoroughly with water.

This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Minimize use of water to prevent environmental contamination

**SECTION 7 - HANDLING AND STORAGE**

KEEP OUT OF REACH OF CHILDREN!

Wear proper safety equipment specified in Section 8 when mixing, loading or otherwise handling concentrate.

**HANDLING:** Use only in a well-ventilated area. Minimize dust generation and accumulation.

**STORAGE:** Store in a well-ventilated, dry place away from heat and other sources of ignition. Store in a cool, clean area. Keep away from food, feed and drinking water.

**SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION****EXPOSURE LIMITS (8 hour TWA, ppm):**

COMPONENT	OSHA PEL	ACIGH TLV
Basic copper sulfate	Not listed*	Not listed
Zinc oxide	10 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)	Not listed

\*OSHA Z-1 Table lists 1 mg/m<sup>3</sup> TWA for metallic copper dusts and fumes

**ENGINEERING CONTROLS:** Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

**PERSONAL PROTECTIVE EQUIPMENT:**

Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.
3. Shoes plus socks
4. Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible wash thoroughly and change into clean clothing.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Light green granular powder
<b>Odor:</b>	None
<b>pH:</b>	7.2 – 8.2
<b>Melting Point:</b>	No data
<b>Boiling Point:</b>	Not applicable
<b>Flash Point:</b>	Not applicable
<b>Evaporation Rate:</b>	Not applicable
<b>Flammability:</b>	Not flammable
<b>Flammability Limits:</b>	Not applicable
<b>Vapor Pressure:</b>	Non-volatile (copper sulfate)
<b>Vapor Density:</b>	Not applicable
<b>Density:</b>	0.41 – 0.45 g/cc (3.42 – 3.76 lb/kg)*
<b>Solubility:</b>	No data
<b>Partition Coefficient:</b>	No data
<b>Auto-Ignition Temperature:</b>	No data
<b>Decomposition Temperature:</b>	No data
<b>Viscosity:</b>	Not applicable

\*Listed density is an approximate value and does not necessarily represent that of a specific batch.

**SECTION 10 - STABILITY AND REACTIVITY**

**PRODUCT REACTIVITY:** May be corrosive to aluminum.

**CHEMICAL STABILITY:** Stable. However may decompose if heated.

**HAZARDOUS REACTION/POLYMERIZATION:** Does not polymerize.

**CONDITIONS TO AVOID:** Temperatures over 125 °F. Avoid exposure to high moisture conditions for prolonged periods.

**INCOMPATIBLE MATERIALS:** Acidic conditions and materials, ammonia. Copper is corrosive to aluminum and iron, especially when in aqueous state and at elevated temperatures.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen chloride, oxides of hydrogen and copper.

**SECTION 11 - TOXICOLOGICAL INFORMATION****ACUTE TOXICITY:**

Oral LD <sub>50</sub> (rat)	>5,050 mg/kg
Dermal LD <sub>50</sub> (rat)	>2,020 mg/kg
Inhalation LC <sub>50</sub> (rat)	2.60 mg/L
Eye Irritation (rabbit)	Mildly irritating
Skin Irritation (rabbit)	Non-irritating
Sensitization (guinea pig)	Not a contact sensitizer

**CARCINOGEN STATUS:**

OSHA	- Not listed
NTP	- Not listed
IARC	- Not listed

**TERATOGENICITY:** Not known to exhibit reproductive or developmental effects.

**MUTAGENICITY:** No evidence of effects during in vivo or in vitro studies.

**SECTION 12 - ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Certain water conditions including low pH (<6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

**FATE:** Basic copper sulfate breaks down to metallic copper which is a chemical element and cannot be further degraded.

**FISH TOXICITY:** (technical)

96 hour LC<sub>50</sub>, Rainbow trout – 110 ppm  
96 hour LC<sub>50</sub>, Bluegill – unknown

**AVIAN TOXICITY:** (technical)

Oral LD<sub>50</sub>, Bobwhite quail – Unknown  
Oral LD<sub>50</sub>, Mallard duck - Unknown

**BEE TOXICITY:** (technical) - Unknown

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Do not contaminate water, food or feed by storage or disposal.

**WASTE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Non-refillable container. Do not reuse or refill this container. Completely empty container into application equipment by shaking and tapping sides and bottom to loosen clinging particles. When completely empty, offer for recycling if available, or dispose of empty bag in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**SECTION 14 - TRANSPORT INFORMATION**

**SHIPPING DESCRIPTION:** Not regulated by DOT  
(Ground transport)

**TRANSPORT HAZARD CLASS:** N/A  
**UN NUMBER:** N/A  
**DOT PACKING GROUP:** PG III

**SECTION 15 - REGULATORY INFORMATION**

**CERCLA REPORTABLE QUANTITY:** 5,000 lbs (as copper metallic)

**SARA TITLE III STATUS:**  
311/312 Hazard Categories – Acute Health  
313 Toxic Chemicals – Copper compound

**CALIFORNIA PROP 65:** Not listed

**TSCA:** This product is exempted from TSCA because it is solely for FIFRA regulated use.

**SECTION 16 - OTHER INFORMATION**

HMIS HAZARD RATINGS	HEALTH	2
	FLAMMABILITY	0
	PHYSICAL HAZARD	0
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

**DISCLAIMER:** The information presented herein is based on available data from reliable sources and is correct to the best of Albaugh's knowledge. Albaugh makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling.

It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

**REVISED DATE:** March, 2016

**REFERENCE:** Revised Section 3 and Section 5 to add zinc oxide