

1. PRODUCT AND COMPANY IDENTIFICATION

Product :	Copper Oxide 75%
Other names:	CHEM COPP 75%, cupric oxide
Product uses:	For use in animal feed mixes.
Uses not recommended:	Not for human consumption.
Details of the supplier of the safety data sheet	
Supplier	Pestell Nutrition
Address	141 Hamilton Rd New Hamburg, Ontario Canada, N3A 2H1
Phone	519-662-2877
Email	qa@pestell.com
Emergency telephone number (24 hr)	Canada: CANUTEC 1 613-996-6666 US: CHEMTREC 1 703-527-3887

2. HAZARDS IDENTIFICATION

Classification System:

The classification is based on the criteria in the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Very toxic to aquatic life with long lasting effects.
Aquatic Acute, Category 1. Aquatic Chronic, Category 1.
 M = 1

GHS Label Elements

WARNING



GHS Hazard Statements:

H410 – Very toxic to aquatic life with long lasting effects.

GHS Precautionary Statements:

P273: Avoid release to the environment.

P391 Collect spillage.

P501 – Dispose of contents/container in accordance with local/national/international regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	% w/w	CAS No.
Cupric Oxide	94%	1317-38-0
Cuprous Oxide	3%	1317-39-1
Talc	<=3%	14807 96 6

4. FIRST AID MEASURES

INHALATION:	Remove to fresh air. Lay patient down. Cover with blanket.
INGESTION:	Give 200 300 mL water to drink. DO NOT induce vomiting. Never give anything by mouth to an unconscious person.
SKIN CONTACT:	For skin exposure, remove contaminated clothing and wash with soap and water.
EYE CONTACT:	If irritated, flush eyes and skin with large volumes of fresh water for 15 minutes. Remove contact lenses if wearing and continue rinsing. Get medical attention if irritation persists.
MEDICAL NOTES:	If any adverse symptoms persist seek immediate medical attention.

5. FIREFIGHTING MEASURES

Extinguishing Media:	CO ₂ , ABC extinguisher, or water spray.
Special Fire Fighting Procedures:	Material is non-flammable. Use firefighting measures appropriate to surrounding materials.
Special Exposure Hazards:	Cuprous oxide is stable in dry air, but can oxidize to cupric oxide in the presence of moist air at temperatures above 100°C.
Additional Information:	Collect contaminated fire fighting water separately. It must not enter the sewer system.
Personal Protective Equipment:	Wear self-contained breathing apparatus.



6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Spilled material may produce dust hazard if not handled correctly. Wear appropriate personal protective equipment: coveralls, gloves & eye protection.
Environmental Precautions:	Do not allow to enter drains or watercourses. If the product enters drains or sewers, immediately inform the local water company. Where there is contamination of streams, rivers or lakes, contact local agency with responsibility for the environment.
Methods for Clean Up:	Contain spillages and clean up with vacuum or conventional tools and attempt to minimize dusting. Place in a suitable container for recycling or disposal in accordance with local and national waste regulations.

7. HANDLING AND STORAGE

Handling:	Only use in a well-ventilated area and prevent the creation of dusts. If concentrations exceed the occupational exposure limits, use suitable respiratory protection.
Storage:	Store in a cool, dry, well-ventilated place. Keep away from food and drink. Keep containers sealed.
Common uses:	Industrial chemicals

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards:	Copper as dusts & mist : OSHA PEL & ACGIH TLV 1 mg/m ³ 8-hour TWA
Occupational Exposure Controls:	All personal protective equipment, including respiratory equipment, used to control exposure to hazardous substances must be selected to meet the requirements of national personal protective equipment regulations.
Personal Protection:	
Ventilation:	To keep below the U.S.A. OSHA and EU exposure limits, use general dilution type ventilation.
Respiratory Protection:	Cartridge type particulate filter respirator or dust-mask conforming to U.S.A. NIOSH. Refer to Respiratory Protective Devices approved by NIOSH under 42 CFR 84 and the appropriate European standard.
	
Hand Protection:	Wear if skin contact is probable and skin is sensitive.
	
Eye Protection:	Safety glasses or goggles.
Skin Protection:	Long sleeve shirt(s) if contact is probable and skin is sensitive.
Environmental Protection:	Do not allow to enter drains or watercourses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black Fine Powder
Odour:	None
Boiling Point:	NA
Evaporation Rate:	NA
Specific Gravity(H ₂ O=1)	6.4
Vapor Pressure:	NA
Vapour Density:	NA
Melting Point:	1326 °C
Solubility in Water:	Negligible(<0.1%)
Percent Volatile (v/v)	0%

10. STABILITY AND REACTIVITY

Chemical stability and reactivity: Stable under recommended storage conditions.

Conditions & Materials to Avoid:

- Temperatures above 100 °C while in the presence of moist air.
- Under certain conditions CuO may react violently with strong reactants such as acids and bases.

Hazardous Decomposition Products: Copper oxides will be released if heated above its melting point (1326 °C).

Hazardous Polymerization: Will Not Occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral (Rat, male and female)	LD50 >2500 mg/kg
Dermal (Rat, male and female)	LD50 >2000 mg/kg bw (male et female) (rat)
Inhalation	No data available.
Skin Corrosion/Irritation:	Not classified as a skin irritant
Serious Eye Damage/Irritation:	Not classified as an eye irritant
Skin Sensitization:	Not classified as a dermal sensitizer
Respiratory Sensitization:	Not classified as a respiratory sensitizer
Germ Cell Mutagenicity:	Not classified
Carcinogenicity:	Not classified as carcinogenic.
Reproductive Toxicity:	No data available.
Single Target Organ Toxicity- single exposure	No data available.
Single Target Organ Toxicity- repeated exposure	No data available.
Aspiration Hazard:	No data available.
Other information	
RTECS:	GL7900000

Possible Signs and Symptoms of Overexposure:

Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has lead to hemolytic anemia and accelerates arteriosclerosis

12. ECOLOGICAL INFORMATION

Toxicity *Aquatic Acute, Category 1. Aquatic Chronic, Category 1. Very toxic to aquatic life with long lasting effects*

Fish:	<i>Oncorhynchus mykiss</i> (Rainbow trout)	LC50: 0.19 - 0.21 mg/L (96 h)
Aquatic Invertebrates:	<i>Daphnia magna</i> (Grande daphnie)	EC50: 0.011 - 0.39 mg/L (48 h)
Alga:	<i>Phaeodactylum tricorutum</i>	NOEC: 0.0057 mg/L (72 h)

Persistence and degradability

Not defined as a persistent substance. Copper ions from cupric oxide are not degradable.

Bioaccumulative potential

Copper is a nutrient that is regulated in organisms by homeostasis and does not bioaccumulate. Bioavailable copper ions are rapidly removed from the water column.

Mobility in soil

Copper ions bind strongly to the ground. $\text{LogKp (solid-water in soil)} = 2120 \text{ L/kg}$

Results of PBT and vPvB assessment

No data available

Other harmful effects

Cupric oxide does not contribute to ozone depletion or formation, global warming, or acid rain.

13. DISPOSAL CONSIDERATIONS

PACKAGING: Dispose of in accordance with procedures applying to the disposal of the product.
PRODUCT: Dispose of surplus and contaminated materials (including sawdust) at an approved landfill or in accordance with other national or regional provisions.

14. TRANSPORT INFORMATION

. Land transport ADR/RID (cross-border) TDG (Canada) & DOT (US)



Proper Shipping Name:

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Copper II Oxide), Class 9, PG III, MARINE POLLUTANT

Note for DOT: Not Regulated. Class 9 materials do not require placarding for U.S.A. ground transport (49 CFR 172.504(f)(9)). *Exceptions*, except when all or part of the transportation is by vessel, the requirements specific to marine pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car, or aircraft (49 CFR 171.4(c)). Permissive labelling is allowed by U.S.A. DOT (49 CFR 172.401(c)).

. Maritime transport IMDG:



- **IMDG Class:** 9
- **UN Number:** 3077
- **Hazard Label:** 9
- **Packaging group:** III
- **Marine pollutant:** yes
- **Proper shipping name:** 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Copper (II) Oxide)
- **EmS Code:** F-A, S-F

• **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 9
- **UN/ID Number:** 3077
- **Hazard Label:** 9
- **Packaging group:** III
- **Proper shipping name:** 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Copper (II) Oxide)

15. REGULATORY INFORMATION

International Inventories

Europe (EU)
United States (TSCA)
Canada (DSL/NDSL)
AICS (Australia)
NZIoC (New Zealand)
Japan (MITI)
ECL (Korea)
Philippines (PICCS)
China (IECSC)

Cupric oxide is not a SEVESO substance, nor a substance that contributes to ozone layer depletion, nor a persistent organic pollutant.

U.S. EPA EPCRA Section 313 Reportable Product (contains copper)

16. OTHER INFORMATION

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Pestell Nutrition and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

Version: 3

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