

MATERIAL SAFETY DATA SHEET

NORDOX® 75 WG

Page 1 of 5

Issue Date: 01/06

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical Product

NORDOX® 75 WG

EPA Reg. No. 48142-4

Common Name: Cuprous oxide

Chemical Description: Cu₂O

TSCA/CAS No.: 1317-39-1

Manufactured By

NORDOX Industrier AS

c/o Monterey AgResources

P.O. Box 35000

Fresno, CA 93745-5000

Emergency Phone Numbers

Emergency Telephone: DAYS: (559) 499-2100 EVES.: (559) 994-9144

CHEMTREC (24-Hour Emergency Number): (800) 424-9300

EPA National Response Center: (800) 424-8802

SECTION 2. HAZARDOUS INGREDIENTS

CHEMICAL	CAS NO.	%	TLV OR PEL	RQ (lbs)
Cuprous oxide	1317-39-1	83.9%	*N.A.	*N.P.

* N.A. – Not Available.

* N.P. – Not Pertinent.

SECTION 3. EMERGENCY/HAZARDS OVERVIEW

Under certain conditions cuprous oxide may react violently with strong reactants such as acids, bases, and metals such as, but not limited to, Al and Mg. Copper fumes will be released if cuprous oxide is heated above its melting point (2255°F). Not D.O.T. Regulated.

HEALTH: 1 REACTIVITY: 1 FLAMMABILITY: 0 ENVIRONMENT: 0

(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

SECTION 4. FIRST AID

- Eyes:** Hold eyes 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.
- Skin:** 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.
- Ingestion:** 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 a Poison Control Center or doctor. Do not give anything by mouth to an unconscious person.
- Inhalation:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

SECTION 5. FIRE AND EXPLOSION HAZARDS

- Flash Point:** Nonflammable.
- Test Method:** Not pertinent.
- LEL Flammable Limits:** Not pertinent.
- UEL Flammable Limits:** Not pertinent.
- Autoignition Temperature:** Not pertinent.
- Flammability Classification:** Nonflammable.
- Known Hazardous Products of Combustion:** Copper fumes.
- Properties that Initiate/Contribute to Intensity of Fire:** None.
- Potential For Dust Explosion:** None.
- Reactions that Release Flammable Gases or Vapors:** None known.
- Potential For Release of Flammable Vapors:** None.
- Unusual Fire & Explosion Hazards:** None.
- Extinguishing Media:** Does not burn. Use water, CO₂, foam or dry chemical as appropriate for surrounding fire.
- Special Firefighting Procedures:** If water is used to extinguish fires in which NORDOX is present, contain water to prevent contamination of drinking water supplies or streams. Move bags from fire area if it can be done without risk.

SECTION 6. SPILLS AND LEAKS

- Containment:** Prevent product spillage from entering drinking water supplies or streams.
- Clean Up:** Wearing protective clothing, use a clean shovel and carefully place material into clean, dry container and cover; remove from area. Use according to label instructions or dispose of at an approved waste disposal facility. Flush spill area with water and collect liquid or absorb onto absorbent material and package for disposal.
- Evacuation:** Not necessary, but restrict entry.

SECTION 7. STORAGE AND HANDLING

- Storage:** Store original bags in a cool, well ventilated, dry place. Keep away from strong alkalies, acids and/or oxidizing agents. Do not reuse bag. Do not store near food or feeds.
- Work/Hygienic Practices:** Causes moderate eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Users should: (1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet; (2) Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing; (3) Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Do not contaminate feed and foodstuffs.

SECTION 8. PERSONAL PROTECTIVE EQUIPMENT

- Eyes:** Chemical dust/splash goggles, safety glasses or full-face shield may be worn to prevent eye contact. As a general rule, do not wear contact lenses when handling.
- Skin:** Chemical-resistant gloves made of any waterproof material and impervious clothes if skin contact is probable and skin is sensitive.
- Respiratory:** Not normally needed. If use generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8710).
- Ventilation:** Recommended but no TLV established.

SECTION 9. PHYSICAL AND CHEMICAL DATA

- Appearance:** Reddish-brown powder.
- Odor:** None.
- pH:** 8.5 (1% solution).
- Vapor Pressure:** Not applicable.
- Vapor Density (Air=1):** Not applicable.
- Boiling Point:** Decompose at 1800°C (a.i.).
- Freezing Point:** Not applicable.
- Water Solubility:** Not water soluble. Soluble in acids and ammonia.
- Density:** 98-101 lbs./ft³.
- Evaporation Rate:** Not applicable.
- Viscosity:** Not applicable.
- % Volatile:** Not applicable.
- Octanol/Water Partition Coefficient:** Not applicable.
- Saturated Vapor Concentration:** Not applicable.

SECTION 10. STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Under certain conditions cuprous oxide may react violently with strong reactants such as acids, bases, and metals such as, but not limited to, Al and Mg. Take precautionary measures against static discharges. Avoid high humidity.
Incompatibility:	Not available.
Hazardous Decomposition Products:	Copper fumes will be released if cuprous oxide is heated above its melting point (2255°F).
Hazardous Polymerization:	Will not occur.

SECTION 11. POTENTIAL HEALTH EFFECTSAcute Effects:

Eyes:	May cause irritation (redness and/or burning).
Skin:	May cause irritation (redness and/or itching). LD ₅₀ > 2000 mg/kg.
Ingestion:	May cause nausea, vomiting and diarrhea. LD ₅₀ (rat) = 3165 mg/kg.
Inhalation:	May cause respiratory irritation. Preexisting lung diseases may be aggravated by exposure. May result in respiratory disease if overexposed on a chronic basis. May cause "metallic fever" after inhalation of dust in the same way as other metal dusts. LC ₅₀ > 4.84 mg/l.

Subchronic Effects: None known.

Chronic Effects: None known.

SECTION 12. ECOLOGICAL INFORMATION

Algal/Lemna Growth Inhibition:	Not known.
Toxicity to Fish and Invertebrates:	Cuprous oxide is an active ingredient in antifouling paints and accordingly toxic to primitive marine organisms.
Toxicity to Plants:	Not known.
Toxicity in Birds:	Not known.

SECTION 13. DISPOSAL

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents according to state and local regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal. Do not discharge.

SECTION 14. TRANSPORTATION

D.O.T. Proper Shipping Description:	Not D.O.T. Regulated.
Other Shipping Description:	Insecticides or Fungicides, Agricultural, Dry. (NMFC Item 102120, LTL Class 60)

SECTION 15. REGULATORY INFORMATION

CERCLA:	Copper and its compounds are listed as priority pollutants by the EPA under the Clean Water Act and as such fall under CERCLA spill reporting requirements of 40 CFR 302.
SARA TITLE III, Section 313 Toxic Chemicals:	This product contains copper compounds and is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
PROPOSITION 65:	None.

SECTION 16. OTHER

While the information contained herein is based on data considered accurate and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act, it is provided for guidance only. Nordox Industrier A.S. does not guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations; in so doing, user assumes all risk in use of the material. The information contained herein is not to be taken as a warranty or representation for which Nordox Industrier A.S. assumes legal responsibility.