



For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,
Call CHEMTREC Day or Night: 1-800-424-9300.
For Medical Emergencies Only, Call 1-877-325-1840.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Champ® Formula 2 Flowable
Synonyms: Copper Hydrate, Cupric Hydroxide
EPA Reg. No.: 55146-64

Company Name: Nufarm Americas Inc. AGT Division
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527

Date of Issue: August 10, 2007
Sections Revised: 1, 11, 14 and 15

Supersedes: February 17, 2006

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance and Odor: Blue to blue-green colored liquid with slight copper odor.

Warning Statements: Keep out of reach of children. CAUTION. Causes moderate eye injury. Harmful if swallowed or absorbed through skin. Avoid breathing vapor or spray mist. Avoid contact with eyes, skin and clothing.

Potential Health Effects:

Likely Routes of Exposure: Inhalation, eye and skin contact

Eye Contact: Mildly irritating based on acute toxicity studies.

Skin Contact: Slightly toxic and slightly irritating to skin based on acute toxicity studies. Excessive exposure, especially if prolonged, may cause skin irritation. Repeated exposure may cause allergic contact dermatitis.

Ingestion: Slightly toxic if swallowed. This material may produce toxicity if ingested in large quantities. Symptoms of overexposure may include nausea and vomiting, abdominal pain, and central nervous system depression, which, if severe enough, may lead to death.

Inhalation: Low inhalation toxicity. Overexposure by inhalation may cause cough, mucous production, shortness of breath, reflecting metal fume fever.

Medical Conditions Aggravated by Exposure: Copper intolerant individuals should not be exposed to this material. No additional information is available on whether overexposure to this material would aggravate other existing special medical conditions.

See Section 11: TOXICOLOGICAL INFORMATION for more information.

Potential Environmental Effects:

This product is toxic to fish and aquatic organisms. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites.

See Section 12: ECOLOGICAL INFORMATION for more information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Copper Hydroxide	20427-59-2	37.5
Other Ingredients		62.5

4. FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 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 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 by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

If on Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

5. FIRE FIGHTING MEASURES

Flash Point: Not applicable due to aqueous formulation

Autoignition Temperature: Not determined

Flammability Limits: Not determined

Extinguishing Media: Use dry chemical, carbon dioxide, water spray or foam.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

Hazardous Decomposition Materials (Under Fire Conditions): Decomposes to CuO and water above 140°F (60°C).

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 2 Flammability: 1 Reactivity: 0

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Clean-Up and Disposal: Pump any free liquid into an appropriate closed container. If feasible, copper may be precipitated/ultrafiltrated with caustics or other chemicals and resulting sludge disposed of in a chemical landfill. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Handling:

Avoid breathing vapor or spray mist. Avoid contact with eyes, skin and clothing. Users should 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.

Storage:

Store in a cool, dry place. Do not store near feed, food or within the reach of children. Do not contaminate water, food, or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:

Eye/Face Protection: To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves made of any waterproof material such as polyvinyl chloride, nitrile rubber, or butyl rubber. An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Copper Hydroxide	1*	NE	1*	NE	mg/m ³

*As copper dusts or mists (CAS No. 7440-50-8)

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES
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Appearance and Odor: Blue to blue-green colored liquid with slight copper odor.

Boiling Point: Not determined

Solubility in Water: Dispersible

Density: 1.371 gm/cm³

Specific Gravity: Not determined

Evaporation Rate: Not determined

Vapor Density: Not determined

Freezing Point: Not determined

Vapor Pressure: Not determined

pH: 8.7 (1% Solution)

Viscosity: Not determined

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Chemical Stability: This material is stable under normal handling and storage conditions.

Conditions to Avoid: Excessive heat.

Incompatible Materials: Acids and sulfur.

Hazardous Decomposition Products: Decomposes to CuO and water above 140°F (60°C).

Hazardous Reactions: Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION**Toxicological Data:**

Data from laboratory studies conducted on a similar, but not identical, formulation:

Oral: Rat LD₅₀: 1,630 mg/kg

Dermal: Rabbit LD₅₀: >5,000 mg/kg

Inhalation: Rat 4-hr LC₅₀: >2.15 mg/l

Eye Irritation: Rabbit: Mildly irritating

Skin Irritation: Rabbit: Slightly irritating

Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: Repeated ingestion of copper salts may result in anemia, liver, and kidney damage. Chronic inhalation exposure may cause a metallic taste in the mouth, irritation of the upper respiratory tract such as the nasal mucosa that may progress to perforation of the nasal septum. Chronic cough may also occur. Copper hydroxide, which comprises 37.5% of this product, governs the toxicity of the product. The remaining components have low to negligible toxicity.

Carcinogenicity / Chronic Health Effects: Low chronic toxicity unless excessive exposure is encountered. Excessive exposure to copper by inhalation may result in irritation of the upper respiratory tract which, if severe, may lead to perforation of the nasal septum after long periods of exposure.

Reproductive Toxicity: No information available.

Developmental Toxicity: No information available.

Genotoxicity: No information available.

Assessment Carcinogenicity: None listed with ACGIH, IARC, NTP or OSHA.

See Section 2: HAZARDS IDENTIFICATION for more information.

12. ECOLOGICAL INFORMATION**Ecotoxicity:**

Data on Copper Hydroxide:

96-hour LC₅₀ Bluegill: 180 mg/l

Bobwhite Quail Oral LC₅₀: >340 mg/kg

96-hour LC₅₀ Rainbow Trout: 0.023 mg/l

Mallard Duck 8-day Dietary LD₅₀: >10,000 ppm

48-hour EC₅₀ Daphnia: 0.0065 mg/l

Environmental Fate:

The degree of mobility of copper in the environment depends upon the pH of ambient soils and waters. The higher the acidity, the more soluble copper salts are and, hence, the more mobile. Partitioning of copper into the air is negligible due to the low vapor pressure of copper salts.

13. DISPOSAL CONSIDERATIONS**Waste Disposal Method:**

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest Environmental Protection Agency Regional Office for guidance.

Container Handling and Disposal:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incinerator or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

DOT

Not regulated by DOT unless shipped by water. See IMO / IMDG description.

IMO / IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.,
(COPPER HYDROXIDE), 9, UN 3082, PG III, MARINE POLLUTANT

IATA

Not regulated

15. REGULATORY INFORMATION**U.S. Federal Regulations:**

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

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):

Immediate

Section 313 Toxic Chemical(s):

Copper- (CAS No. 7440-50-8), 24.4% equivalent by weight in product

Reportable Quantity (RQ) under U.S. CERCLA:

Copper- (CAS No. 7440-50-8) 5,000 pounds

RCRA Waste Code:

None

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: Listed under copper (CAS No 7440-50-8) with footnotes referencing above federal standards.

16. OTHER INFORMATION

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS 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-accepted label.

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