

## MATERIAL SAFETY DATA SHEET

### SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**COMPANY ADDRESS:**

ALBAUGH INC.  
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Ankeny, IA 50021  
(800) 247-8013

**EMERGENCY TELEPHONE NUMBERS:**

(800) 424-9300 (CHEMTREC, transportation and spills  
toll free number USA, Canada and US Virgin Islands)  
(703) 527-3887 (CHEMTREC for calls elsewhere, collect  
calls are accepted)

**PRODUCT NAME:** NU COP 50 DF

**CHEMICAL NAME & SYNONYMS:** Copper (II) Hydroxide, Cupric Hydroxide

**CHEMICAL FORMULA:** Cu(OH)<sub>2</sub>

**CHEMICAL FAMILY:** Weak base of transition metal

**EPA REG. No:** 45002-4

### SECTION 2. CHEMICAL COMPOSITION AND DATA ON COMPONENTS

**COMPONENT:** Copper Hydroxide

**CAS No:** 20427-59-2

**% ACTIVE INGREDIENT:** 77%. (50% of Copper Content)

**OSHA PERMISSIBLE EXPOSURE LIMIT (PEL):** Copper dusts and mists -1 mg/m<sup>3</sup>.

**ACGIH THRESHOLD LIMIT VALUE (TLV):** Copper dusts and mists -1 mg/m<sup>3</sup>.

### SECTION 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:**

- May be harmful if swallowed, inhaled or absorbed through skin.
- Causes severe eye irritation.
- Avoid breathing dusts or spray mist.
- Avoid contact with eyes, skin or clothing.
- KEEP OUT OF REACH OF CHILDREN.

**POTENTIAL HEALTH HAZARDS:**

**SKIN:** Mild temporary irritant. Prolonged or repeated contact may cause slight irritation.

**INHALATION:** Moderately irritating to respiratory tract. Prolonged inhalation may be harmful.

**INGESTION:** May be harmful if swallowed.

**EYES:** Severely irritating to the eyes, corrosive. If not removed promptly, will injure eye tissue, which may result in permanent damage.

**POTENTIAL PHYSICAL HAZARDS:** Can decompose at high temperatures forming toxic gases.

**ENVIRONMENTAL HAZARDS:** Toxic to wild life and domestic animals.

### SECTION 4. FIRST AID MEASURES

**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 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.

**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.

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- Do not give anything by mouth to an unconscious person.

**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.

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

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate use of gastric lavage.

## **SECTION 5. FIRE FIGHTING MEASURES**

**FLASH POINT:** NA

**LeL:** NA

**UeL:** NA

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

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

**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 run off.

**SPECIAL FIRE FIGHTING PROCEDURES:** If Copper Hydroxide is involved in a fire, avoid breathing smoke. Use a positive-pressure, self-contained breathing air supply. Avoid getting water from fire fighting into domestic or irrigation water supplies.

**HAZARDOUS COMBUSTION PRODUCTS:** Oxides of Copper.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **STEPS TO BE TAKEN IF THE MATERIAL IS RELEASED OR SPILLED:**

Clean up spills immediately, observing precautions in Protective Equipment section. Isolate hazard area. Keep unnecessary personnel from entering. Vacuum collect into containers for recovery and disposal. Mark and store containers as hazardous waste.

**WASTE DISPOSAL METHOD:** Dispose on approved hazardous waste disposal site. Follow applicable State and Federal regulations.

## **SECTION 7. HANDLING AND STORAGE**

### **KEEP OUT OF REACH OF CHILDREN!**

**STORAGE TEMPERATURE:** Below 125 °F

**AVERAGE LIFE:** Five years under normal storage conditions.

**SPECIAL SENSITIVITY (HEAT, LIGHT, MOISTURE, ETC):** None.

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

**STORAGE:** Store in a well-ventilated, dry place away from strong acids and ammonia. Store in a cool, clean area. Keep away from food.

## **SECTION 8. EXPOSURE CONTROLS, PERSONAL PROTECTION**

Some materials that are chemical-resistant to this product are any waterproof material. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

### **Applicators and other handlers must wear:**

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves made of any waterproof material
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:**

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Solid (micro granules)

**ODOR:** None.

**VAPOR PRESSURE (25 °C):** NA

**MOLECULAR WEIGHT:** 97.56

**COLOR:** Pale Blue

**BULK DENSITY:** 31-35.5 lb/ft<sup>3</sup>

**Ph:** 6.5 (1% w/w in water)

**VAPOR DENSITY (AIR = 1):** NA

**MELT POINT:** Decomposes 140 °C

**SPECIFIC GRAVITY:** NA

**WATER SOLUBILITY (25 °C):** 2.9 mg/L

**BOILING POINT:** NA (Decomposes 140 °C)

**% VOLATILE BY VOLUME:** 1-2% (Water)

**FREEZING POINT:** NA

**SECTION 10. STABILITY AND REACTIVITY**

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

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

**POLYMERIZATION:** Does not polymerize.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Ammonia or acid vapors. Strong acids. Copper is corrosive to aluminum, especially when in aqueous state and elevated temperatures.

**HAZARDOUS DECOMPOSITION:** Decomposes in high temperature to CuO +H<sub>2</sub>O.

**SECTION 11. TOXICOLOGICAL INFORMATION**

**OSHA PERMISSIBLE EXPOSURE LIMIT (PEL):** Copper dusts and mists -1 mg/m<sup>3</sup>.

**ACGIH THRESHOLD LIMIT VALUE (TLV):** Copper dusts and mists -1 mg/m<sup>3</sup>.

**ACUTE TOXICITY:**

**LD<sub>50</sub> ORAL (Rats):** 1,300 mg/kg

**LD<sub>50</sub> DERMAL (Rats):** >2,000 mg/kg

**LC<sub>50</sub> INHALATION (Rabbit):** > 1,692 mg/m<sup>3</sup>

**EYE IRRITATION (rabbit):** Severe, corrosive.

**SKIN IRRITATION (rabbit):** Slight.

**SENSITIZATION (guinea pig):** Non sensitizing.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Acute asthma and/or other chronic pulmonary diseases due to inhalation of dust or spray mists.

**CARCINOGEN STATUS:**

**OSHA:** Not listed

**NTP:** Not listed

**IARC:** Not listed

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

**ADDITIONAL DATA:** Not known to exhibit reproductive or teratogenic (birth defect) effects.

**SECTION 12. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** This product is toxic to fish and aquatic organisms. Do not apply directly to water, or to areas where surface water is present. Do not contaminate water when disposing of equipment wash waters.

**FISH TOXICITY:** (Technical)

**FISH LC<sub>50</sub> (as 100% active):** Blue Gill 180 ppm/96 hrs.

**FISH LC<sub>50</sub> (as 100% active):** Rainbow Trout 25 ppm/96 hrs.

**AVIAN TOXICITY:** (Technical)

**ORAL LD<sub>50</sub> (Bobwhite quail):** 3,400 mg/kg.

**ORAL LD<sub>50</sub> (Mallard duck):** > 5,000 mg/kg.

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**BEE TOXICITY:** Non toxic.

### **SECTION 13. DISPOSAL CONSIDERATIONS**

**WASTE:** Product wastes are Toxic. Dispose in accordance with applicable Federal, State and Local laws and regulations.

**CONTAINER:** Refer to product label.

### **SECTION 14. TRANSPORT INFORMATION**

**UN NUMBER:** None

**DOT HAZARD CLASS:** Not Regulated.

**D.O. T. LABELS/PLACARDS REQUIRED:** None required.

**FREIGHT CLASSIFICATION:** Copper Hydroxide, solid, N.O.I (NMFC Item 102120)

**DOT EMERGENCY RESPONSE GUIDE #:** NA

### **SECTION 15. REGULATORY INFORMATION**

**FIFRA:** All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside the normal use and application as a pesticide.

**OSHA HAZARD COMMUNICATION STANDARD STATUS:** Regulated

**SARA TITLE III:**

**Sec. 302- 304 (40 CFR 350):** Not listed.

**Extremely Hazardous Substance (EHS):** Not applicable.

**Reportable Quantity (RQ) (CERCLA):** Copper -5,000 pounds.

**Sec. 312 Reporting (40 CFR 370):**

SARA/OSHA Hazardous Chemical reporting Quantity is 10,000 pounds.

**Reporting Status:** Mixture, solid.

**Reporting Hazards:** Acute.

**Sec. 313 Reporting (40 CFR 372):** Not listed.

**RCRA Hazardous Waste:** Not listed.

### **SECTION 16. OTHER INFORMATION**

**DISCLAIMER:** The information presented herein is based on available data from reliable sources and is correct to the best of Albaugh, Inc.'s knowledge. Albaugh, Inc. 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 constructed 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. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

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