

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY ADDRESS: ALBAUGH INC.
121 NE 18th Street
Ankeny, IA 50021

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
(800) 247-8013 calls are accepted)

PRODUCT NAME: Basic Copper 50W HB
CHEMICAL NAME & SYNONYMS: Basic Copper Sulfate
CHEMICAL FORMULA: $\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2 \cdot \text{H}_2\text{O}$
CHEMICAL FAMILY: Transitional metal
EPA REG. No: 42750-168

SECTION 2. CHEMICAL COMPOSITION AND DATA ON COMPONENTS

COMPONENT: Basic copper sulfate
CAS No: 1344-73-6
% ACTIVE INGREDIENT: 93% (50% of Copper Content)
OSHA PERMISSIBLE EXPOSURE LIMIT (PEL): Copper dusts and mists -1 mg/m³.
ACGIH THRESHOLD LIMIT VALUE (TLV): Copper dusts and mists -1 mg/m³.

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:
HEALTH HAZARDS: Severe to corrosive eye irritant.
PHYSICAL HAZARDS: May corrode metals such as aluminum and galvanized or mild steel. ENVIRONMENTAL HAZARDS:
Moderately toxic to fish and aquatic plants.

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 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.

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.

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 Basic Sulfate 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, hydrogen chloride.

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 reuse or 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!

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

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:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing if product 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.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Fine, blue-green powder	VAPOR DENSITY (AIR = 1): NA
ODOR: No appreciable odor.	MELT POINT: NA
VAPOR PRESSURE (25 °C): NA	SPECIFIC GRAVITY: NA
MOLECULAR WEIGHT (technical): 470.3	WATER SOLUBILITY (25 °C): Dispersible
COLOR: Blue-green	BOILING POINT: NA
BULK DENSITY: .50 g/ml (lb/ft ³)	% VOLATILE BY VOLUME: < 1%
Ph: 7.0 – 7.5 (1% w/w in 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): Acidic conditions and materials, ammonia. Copper is corrosive to aluminum and iron, especially when in aqueous state and at elevated temperatures.

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

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

LD ₅₀ ORAL (Rats):	1,500 mg/kg
LD ₅₀ DERMAL (Rats):	>2,000 mg/kg
LC ₅₀ INHALATION (Rabbit):	> 1.03 mg/l
EYE IRRITATION (rabbit):	Severe
SKIN IRRITATION (rabbit):	Slightly irritating
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 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. For terrestrial uses, do not apply directly to water, or 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 washwater 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.

FISH TOXICITY: (Technical)
FISH LC₅₀ (as 100% active): Blue Gill Unknown.
FISH LC₅₀ (as 100% active): Rainbow Trout Unknown.
AVIAN TOXICITY: (Technical)
ORAL LD₅₀ (Bobwhite quail): Unknown
ORAL LD₅₀ (Mallard duck): Unknown.
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: Agricultural fungicide, solid, N.O.I. B.N.
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'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 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. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

REVISED DATE: June, 2007
REFERENCE: Initial version