

MATERIAL SAFETY DATA SHEET

PRODUCT : Copper Hydroxide 53.8% DF

PRODUCT DESIGNATION : Fungicide

Section 1. Product & Company Identification

Common Name : Copper Hydroxide

Grade : Formulation

Active Ingredient : Copper Hydroxide

Chemical Name of Active : copper;dihydrate

Ingredient (IUPAC)

Chemical Family of A. I. : Fungicide

Molecular Formula of A. I. : CuH_4O_2

Molecular Mass of A. I. : 99.58 g/mol

Manufacturer & Supplier : **M/s United Chemicals**

Head office:B-371, 1st Floor, Meera Bagh, New Delhi,

Factory:15/1, 15/2, 15/3, Industrial Estate, Vidisha,
(M.P)

Telephone Number : +91-11-25258770

Section 2. Composition / Information on Ingredients

<u>Name of Components</u>	<u>Concentration% w/w</u>
Copper Hydroxide a.i.	53.80% w/w
Inert ingredient	46.20% w/w
TOTAL	100.00% w/w

Section 3. Hazards Identification

EMERGENCY OVERVIEW

May be harmful if swallowed.

Causes severe eye irritation.

Avoid breathing dusts or spray mist.

Avoid contact with eyes, skin or clothing.

Keep out of reach of children

Section 4. First Aid Measures

If in Eyes : Flush immediately with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

If in Skin : Wash thoroughly with soap and water. Remove contaminated clothing and shoes and launder.

If Inhaled : Remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. Get medical attention.

If Swallowed : Offer a glass of water or milk to drink. Call a physician or poison control center. Do not induce vomiting unless directed.

Antidote: There is no specific antidote. Treat symptomatically.

Section 5. Fire Fighting Measures

Suitable extinguishing media : Water spray, Dry chemical, Foam, Carbon dioxide (CO₂)

Unsuitable extinguishing media : High volume water jet, (contamination risk) Specific hazards : No information available.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Specific extinguishing methods : No information available.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Control Runoff. (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures : Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Use personal protective equipment. Use personal protective equipment.

Environmental precautions : Prevent material from entering sewers, waterways, or low areas.

Methods and materials for containment and cleaning up : Clean-up methods - large spillage Prevent further leakage or spillage. Use approved industrial vacuum cleaner for removal. Shovel into suitable container for disposal. Clean-up methods - small spillage Sweep up or vacuum up spillage and collect in suitable container for disposal.

Additional advice : Dispose of in accordance with local regulations.

Section 7. Handling & Storage

Handling Technical measures/Precautions : Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

Precautions for safe handling : Keep away from heat and sources of ignition. Avoid dust formation in confined areas. During processing, dust may form explosive mixture in air.

Storage Suitable storage conditions: Store in a cool, dry place. Store product in original container only in a location. inaccessible to children and pets. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Observe label precautions.

Section 8. Exposure Control, Personal Protection

Control parameters

No occupational exposure limit values are applicable.

Engineering measures : Use only with adequate ventilation.

Biological occupational exposure limits : No information available.

Personal protective equipment Respiratory protection : Where there is potential for airborne exposures in excess of applicable limits, wear approved respiratory protection with dust/mist cartridge.

Hand protection : Material: Chemical-resistant gloves

Eye protection : Wear protective eyewear to prevent contact with this substance.

Skin protection : Wear protective clothing such as gloves, apron, boots, or coveralls, as appropriate.

Hygiene measures : Avoid contact with skin, eyes and clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Wash all protective clothing after use.

Protective measures : All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated. End users of this product should follow label instructions for personal protection when using this product.

Section 9. Physical and Chemical Properties

Appearance / state	: Blue, granular solid
Colour	: Blue
Odour	: characteristic copper odor
Ph	: 9.1
Density	: 1.0417 g/cm ³
Flash point	: Not applicable
Solubility	: Water solubility : 0.0029 g/l
Auto-ignition temperature	: 340 °C

Section 10. Stability & Reactivity

Reactivity : No information available.

Chemical stability : Stable at normal temperatures and storage conditions.

Possibility of hazardous reactions : No information available.

Conditions to avoid : Temperature: > 140°C Avoid extreme heat.

Hazardous decomposition products : Copper oxides.

Section 11. Toxicological Information

Acute Oral Toxicity : LD₅₀ for rats : >1346 mg/kg

Acute Dermal Toxicity : LD50 for rats : >5000 mg /kg

Acute Inhalation : LC50 (4h) rats : >1.3 mg/l

Eye Irritation : Non irritant

Skin Irritant : Non irritant

Skin sensitization : Moderate skin sensitizer.

Section 12. Ecological Information

Aquatic Toxicity : Rainbow Trout: LC50: (4.79mg/L)

Daphnia magna: 48 hour LC50: 0.0025 mg/L

Acute toxicity to aquatic invertebrates EC50/72 h/Pseudokirchneriella subcapitata (green algae): 18.03 mg/l

Section 13. Disposal Consideration

Waste disposal methods : In accordance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. Refer to the product label for instructions.

Contaminated packaging : Do not re-use empty containers.

Section 14. Transport Information

IMDG Classification

Shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (Copper hydroxide)

Class : 9

Packing group : III

UN number : 3077

Marine pollutant : Yes

Section 15. Regulatory Information

product subject to regulatory requirements under the Insecticides Act, 1968 and Insecticides Rules, 1971.

Section 16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

Safety Division : UNITED CHEMICALS, SAFETY DIVISION



UNITED