

# **MATERIAL SAFETY DATA SHEET**

## **1. IDENTIFICATION OF THE SUBSTANCE**

Product name: COPPER OXYCHLORIDE WP  
Fungicide  
UN Number: 2775

## **2. COMPOSITION / INFORMATION ON INGREDIENTS**

Common name: Copper oxychloride  
Chemical Name: Diccopper chloride trihydroxide (IUPAC)  
CAS No.: 1332-40-7  
Chemical Family: Inorganic  
Chemical Formula:  $\text{ClCu}_2\text{H}_3\text{O}_3$  (Mol. Wt.: 213.6)  
Use: Foliar fungicide with protective action.

## **3. HAZARD IDENTIFICATION**

Toxicity class: WHO III; EPA III  
Likely routes of exposure: Skin and eye contact and ingestion.  
Eye contact: Irritant to eyes.  
Skin contact: Slightly irritant.  
Ingestion: The product can be harmful. Inhalation: Negligible toxicity

## **4. FIRST AID MEASURES AND PRECAUTIONS**

SWALLOWED: Seek medical attention immediately. NOTE: Do not give fluids, tablets or induce vomiting if patient is unconscious or convulsing.  
EYE: Hold eyelids open and flush eyes with water for at least fifteen minutes. Seek medical attention.  
SKIN: Immediately remove contaminated clothing and wash skin thoroughly with soap and water.  
FIRST AID FACILITIES: Soap, water.  
ADVICE TO DOCTOR: Treat symptomatically

## **5. FIRE FIGHTING MEASURES**

Fire hazard and explosion hazard: No fire hazard, but fine dust in air may form an explosive mixture if source of ignition is present.  
Extinguishing agents: Extinguish fires with water, carbon dioxide, dry powder, or alcohol-resistant foam.  
Fire fighting: Fight fire from maximum distance. Remove container from fire area if possible. Contain fire control agents for later disposal. Water can be used to cool unaffected containers.  
Personal protective equipment: Fire-fighters and others that may be exposed should wear full chemical protective clothing and full-face breathing apparatus.

## **6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)**

Personal precautions: For personal protection see Section 8. Environmental precautions: Do not allow entering drains or watercourses. When the product contaminates public waters, inform appropriate authorities immediately in accordance with local regulations.

Occupational spill: For small dry spills, sweep up with damp earth or sand or other suitable absorbents, taking care not to raise a dust cloud. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away and upwind.

Large spills: Should be covered to prevent dispersal. Vacuum or shovel waste into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose it in accordance with local regulations.

## **7. HANDLING AND STORAGE REQUIREMENTS**

Handling: Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Keep out of reach of unauthorized persons, children and animals. Store in its original labelled container in shaded, well-ventilated area. Store in dry area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

## **8. EXPOSURE CONTROL/PERSONAL PROTECTION**

Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT: Clothing: Employee must wear appropriate protective (impervious) clothing; boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Gloves: Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

Eye protection: The use of safety goggles is recommended.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Light green powder

Odour: Odourless

Flash point: Not applicable

Explosive properties: Fine dust in air may form an explosive mixture if source of ignition is present.

Oxidizing properties: No information currently available.

pH: No information currently available.

Storage stability: Stable up to two years under normal conditions.

Suspensibility: 88 % suspended after standing for 30 minutes in standard hard water.

Solubility in water:

Dispersible in water. Solubility in organic solvents: Soluble in dilute acids and ammonium hydroxide.

Partition-coefficient in n-octanol / water: No data information available.

Melting point: Not applicable

## **10. STABILITY AND REACTIVITY**

Stability: Stable under normal, dry storage conditions. (Very stable in neutral media).

Incompatibility: Incompatible with mercury-containing compounds, thiram, DNOC, lime sulphur and dithiocarbamates.

Thermal decomposition: Decomposes on heating above 220 °C. Decomposes on heating in alkaline media with the formation of copper oxides (toxic).

## **11. TOXICOLOGICAL INFORMATION**

Acute oral LD50: > 1694 mg/kg in rats.

Acute dermal LD50: > 2400 mg/kg in rats.

Acute inhalation LC50: LC50 > 30mg/l (4 hour).

Acute skin and eye irritation: Skin and eye irritating.

Dermal sensitization: No information currently available.

Carcinogenicity: Animal studies did not detect any carcinogenic activity. No human data available.

Teratogenicity: Animal studies did not detect any teratogenic effects. No human data available.

Mutagenicity: Not mutagenic.

## **12. ECOLOGICAL INFORMATION**

Degradability: Formation of toxic oxides on heating.

Decomposes at temperatures > 220 °C.

Mobility: Strongly absorbed by soils

Accumulation: No information currently available.

ECOTOXICOLOGY: Birds: No information available

Fish: LC50 (48 hours) = 2.2 mg/l (Carp)

Daphnia: LC50 (24 hours) = 3.5 mg/l

Bees: Not toxic to bees

Earthworms: No information available

Soil micro-organisms: No information available

## **13. DISPOSAL CONSIDERATION**

Pesticide disposal: Contaminated absorbents, surplus product, etc., should be burned in a high-temperature incinerator (> 1000 °C) with effluent gas scrubbing. Never pour untreated waste or surplus products into public sewers or where there is any danger of

run-off or seepage into water systems. Comply with local legislation applying to waste disposal.

Package product wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, reconditioned, or destroyed. Combustible containers should be disposed of in pesticide incinerators or buried in an approved landfill. Non-combustible containers must first be triple-rinsed with water. Containers should be punctured and transported to a facility for recycling or disposal in approved landfill site. Comply with any local legislation applying to disposal

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

UN NUMBER: 2775

ADR/IRD: Substance ID NR: 2775

Hazard ID NR: 60

Label: 6.1 + 3

AIR/IATA: Class: 6.1

Subsidiary Risk: -

Hazard Label: Poison

Packaging group: III

IMG/IMO: Packaging group: III

Label of class: 2775

Subsidiary Risk: -

Shipping Name: Poison

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

Symbol: Xn,

Indication of danger: Harmful if swallowed.

Risk phrases:

R 22 Harmful if swallowed.

Safety phrases:

S 2 Keep out of the reach of children.

S 22 Do not breathe dust. 16.

#### **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 recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.