



# HYDROCOP WG

## SAFETY DATA SHEET

Revised – June 2017

### 1. IDENTIFICATION

Product Name: Hydrocop WG  
 Recommended Use: Fungicide

Supplier: Melpat International Pty Ltd  
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### 2. HAZARD(S) IDENTIFICATION

According to Regulation (EC) No. 1272 / 2008:

Acute Toxicity (Oral) (category 4) : Harmful if swallowed

Skin Irritation (category 2) : Causes skin irritation

Eye Irritation (category 2A) : Causes serious eye irritation

Aquatic Acute (category 1) : Very toxic to aquatic life

Aquatic Chronic (category 1) : Very toxic to aquatic life with long lasting effects.

Pictogram:



Signal Word: WARNING

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Note:** This product contains 77% w/w copper (II) hydroxide equivalent to 50% w/w elemental copper (Cu).

Common Name	: Copper (II) Hydroxide
CAS Name	: copper hydroxide
Molecular Formula	: $\text{CuH}_2\text{O}_2$
Structural Formula	: $\text{Cu}(\text{OH})_2$
Molecular Mass	: 97.56g/mol
Concentration	: $\geq 77\%$
CAS No	: 20427-59-2
UN No	: 3077
Class	: 9
EC Number	: 243-815-9

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### 4. FIRST AID MEASURES

If accidental contact with product occurs, proceed as follows:

Ingestion	: DO NOT give anything by mouth to an unconscious person. Promptly drink large quantities of water. DO NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medical attention immediately.
Skin Contact	: Provide safety showers. Remove contaminated clothes and shoes. Wash with lukewarm water and soap to remove all evidence of the chemical (approximately 15 minutes). Give medical attention. Launder contaminated clothing before reuse.
Eye Contact	: Hold eyelids open and flush with lukewarm water for at least 20 minutes, until no evidence of the chemical remains. If wearing contact lenses, remove immediately. Seek medical attention immediately.
Inhalation	: Remove victim to fresh air. If breathing is difficult, give oxygen. Give artificial respiration if necessary. Seek medical attention if symptoms persist.

Important Symptoms and Effects (both acute and delayed)

: Symptoms of systemic copper poisoning may include: Capillary damage; headache; weak pulse; cold sweat and kidney and liver damage; central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma.

Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper disposition in the corneas exemplified by humans with Wilson’s disease.

There have also been reports of copper poisoning leading to hemolytic anemia and accelerates arteriosclerosis.

Advice to treating physician

: Medical treatment should be symptomatic and supportively. Chelating agents should be prescribed as well as pain medication for pain relief if necessary.

**5. FIRE FIGHTING MEASURES**

Extinguishing media

: Use dry chemical powder, carbon dioxide, foam – use extinguishing media that is suitable to the environment. Avoid using water jets as this will cause product to run into drains and water ways.

Special hazards arising from the substance or mixture

: Thermal decomposition products include highly toxic gases: copper oxides. Negligible fire and explosion hazard when exposed to heat or flame.

Personal protection equipment for fire fighting

: Use adequate protective clothes (including gloves) and self-contained, positive pressure breathing apparatus, approved specifically for confined areas.

Additional Information

: In case of fire, prevent by any means possible spillage from entering drains or water ways.

Hazardous Material Information

<b>HEALTH</b>	<b>2</b>	
<b>FLAMMABILITY</b>	<b>0</b>	
<b>REACTIVITY</b>	<b>0</b>	
<b>PROTECTIVE EQUIPMENT</b>	<b>E</b>	

Hazard Ratings:

4 = severe

3 = serious

2 = moderate

1 = slight

0 = minimal

E = Safety glasses, gloves, dust respirator

**6. MEASURES TO CONTROL SPILLS AND LEAKS**

Personal Precautions, Protective Equipment and Emergency Procedures : For non-emergency personnel:  
Use self-contained breathing apparatus and protective clothing and gloves to prevent contact with eyes and skin. Ensure area is well ventilated. Avoid making dust.

For emergency responders:  
Use self-contained breathing apparatus and protective clothing and gloves to prevent contact with eyes and skin.

Environmental Precautions : Pollution may occur by runoff from fire control or dilution water.  
Avoid the material from entering drains or water ways.  
Toxic to aquatic ecosystems.

Methods and Materials for containment and cleaning up : Spills on the Ground

- Small Spills
- Isolate area and prevent people from entering.
  - Avoid making dust.
  - Mop and wipe away.
  - Place material in a clean, dry container and seal for subsequent disposal.
  - Properly dispose of material according to local regulations.

- Large Spills
- Isolate area and prevent people from entering.
  - Avoid making dust.
  - Scoop up the material.
  - Place material in a clean, dry containers and seal for subsequent disposal.
  - Properly dispose of material according to local regulations.

: Spills on the Water  
Isolate spill area. Recover the material as soon as possible – material is water dispersible. Deposit into a suitable container and dispose of according to local regulations. DO NOT drink the contaminate water. High concentrations of copper in water are toxic to aquatic ecosystems.

**7. HANDLING & STORAGE**

General Information : Stove above 0°C and below 35°C.  
Average shelf life under proper storage conditions is at least 2 years.

Precautions	: Avoid dust generation. Work in a well ventilated area. Provide suction extractors if dust is formed. Avoid eye and skin contact. Avoid breathing in dust. Use safety goggles, protective clothing, gloves and dust respirator (covering nose and mouth). Keep product sealed and dry. DO NOT eat, drink or smoke near the product. Remove contaminate clothing and protective equipment before entering eating areas. Wash hands thoroughly before eating or drinking.
Conditions for safe storage	: Do not store in metal containers. May be corrosive to metal after a long period of storage. Keep product sealed and dry. Do not store in an unlabeled container. Product is hygroscopic and air sensitive. Store in a cool, clean, dry and well ventilated area – out of direct sunlight. Protect from rain and excessive heat. Do not store near feed, food or within reach of children.
Incompatibilities	: Concentrated acids, dicloran, calcium polysulfide and ammonia are some of the substances copper hydroxide cannot be stored with.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

CONTROL PARAMETERS	: Prevent accumulation of dust in the air. Control enclosed spaces with adequate ventilation. Prevent exceeding the: TLV (Threshold Limit Value): 1mg/m <sub>3</sub> for copper dusts and mists as Cu; and PEL (Permissible Exposure Limit): 1mg/m <sub>3</sub> for copper dusts and mists as Cu.
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### EXPOSURE CONTROLS:

Appropriate Engineering Controls	: Use local ventilation if dust is a problem, to maintain air levels below the recommended exposure limit.
Personal Protective Equipment	: <u>Eye / Face Protection:</u> Wear splash-proof / dust resistant safety goggles. Use equipment for eye protection that is tested and approved under appropriate government standards.  <u>Skin Protection:</u> Wear impervious clothing to prevent repeated or prolonged skin contact with this product.

Hand Protection:

Wear PVC gloves.

Dispose of contaminated gloves after use.

Avoid skin contact with this product.

Wash and dry hands.

Respiratory Protection:

Wear approved dust and mist respirator.

Other Recommendations:

After handling this product, always wash hands before eating, drinking, smoking or using the toilet.

Wash contaminated clothing and other protective equipment before storing and re-using.

**9. PHYSICAL & CHEMICAL PROPERTIES**

Appearance and colour	: Light green blue wettable granule
Odour	: Characteristic copper odour
pH (water suspension 1%)	: 7.0 to 10.5
Melting point	: decomposes above 140°C
Flammability	: not flammable not combustible
Water solubility	: product is insoluble in water product is <u>dispersible</u> in water
Solubility	: product is soluble in aqueous ammonia.
Insolubility:	: insoluble in organic solvents
Auto ignition temperature	: Not applicable
Explosive properties	: not explosive

**10. STABILITY & REACTIVITY**

Reactivity	: Not considered reactive under normal temperatures and pressures.
Chemical Stability	: Stable under normal temperatures and pressures. Not a self-heating substance. Product does not ignite when it comes in contact with water nor evolve gases.

Possibility of hazardous reactions	: No dangerous reactions. This product will not react or polymerise.
Conditions to avoid	: Excessive heat, direct sunlight, high moisture / humid conditions, dust generation, incompatible materials / products. Substances with acid reaction.
Incompatible Materials	: Concentrated acids, dicloran, calcium polysulfide and ammonia.
Hazardous Decomposition Products	: Decomposes, giving off highly toxic gases. Copper oxides.

## 11. TOXICOLOGICAL INFORMATION

Permissible Exposure Limit (PEL):	1 mg/m <sup>3</sup> (TWA) for copper dusts and mists as Cu.
Threshold Limit Value (TLV):	1 mg/m <sup>3</sup> (TWA) for copper dusts and mists as Cu.

### INFORMATION ON TOXICOLOGICAL EFFECTS:

Acute Toxicity	: LD <sub>50</sub> oral (rats): >1,500 mg/kg. LD <sub>50</sub> dermal (rats): >5,700 mg/kg LC <sub>50</sub> inhalation (rats): >30mg/L (4h)
Skin irritation	: Yes
Serious eye irritation	: Yes
Skin sensitization	: None expected.
Germ cell mutagenicity	: Not known
Carcinogenicity	: Not known
Teratogenicity	: Not known
STOT – Single Exposure	: No clear evidence.
STOT – Repeated Exposure	: No evidence. In a 90-day trial study conducted in mice and rats, with a dose level of 32mg/kg bw copper, liver and kidney changes were observed, but not considered significant or severe effects.
Aspiration Hazard	: Acute exposure of inhaling dusts / mists of copper salts, may cause irritation to the upper respiratory tract, with symptoms of coughing, burning and/or breathing difficulty.

### INFORMATION ON ROUTES OF EXPOSURE:

Ingestion	: Harmful if swallowed. Often has an irritating effect on the gastrointestinal tract. Symptoms are severe if copper is retained in the stomach (such as an unconscious victim). Some indications of poisoning that occur after product is swallowed include a metallic taste in the mouth, burning pain in the chest and abdomen, intense nausea,
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vomiting, diarrhoea, headache, sweating, shock, discontinued urination leading to yellowing of the skin. Injury may also occur to the brain, liver, kidneys and stomach and intestinal linings.

Skin contact	: Causes skin irritation. Excessive exposure will cause skin irritation with pain, itching and redness. Severe over exposure will cause skin burns. Prolonged exposure may cause dermatitis.
Eye contact	: Causes serious eye irritation. Exposure will cause redness and pain. Prolonged exposure may cause conjunctivitis, turbidity, ulceration and corneal abnormalities.
Inhalation	: Workers exposed to copper salts in dust form complained of a metallic taste in the mouth, irritation of nasal passages and oral mucous. Acute exposure may cause irritation of upper respiratory tract with symptoms of coughing, burns and/or breathing difficulty.

#### CHRONIC TOXIC EFFECTS:

Individuals with Wilson's Disease are unable to metabolise copper. Therefore the copper accumulates in various tissues. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in cornea as exemplified by humans with Wilson's Disease. It has also been reported that copper poisoning has led to hemolytic anemia and accelerates arteriosclerosis.

## 12. ECOLOGICAL INFORMATION

#### TOXICITY:

Very toxic to aquatic life with long lasting effects.

Fish (Onchorincus mykiss)	: LC50 (96h): 0.035 mg/L
Fish (Fathead minnow)	: LC50 (96h): 0.027 mg/L
Freshwater invertebrate (Daphnia magna)	: LC50 (48h): 0.085 mg/L
Algae (Scenedesmus Subspicatus)	: EC50 (72h): 45 mg/L
Birds (Bobwhite quail)	: Oral LD50: > 4000mg/kg
Birds (Mallard duck)	: Oral LD50: > 6000mg/kg
Very Toxic	: to fish, molluscs, crustaceans, insects.
Harmful	: to terrestrial fauna, birds, algae.
Moderate	: earthworms
Not toxic	: to bees



PERSISTANCE AND DEGRADABILITY:

Copper is persistent, but binds to soil particles and become biologically unavailable. The substance is not biodegradable.

BIO-ACCUMULATIVE POTENTIAL:

Copper does not bio-accumulate. However, it must be used in a manner that minimises accumulation of copper in the soil.

Copper is stored primarily in the liver, brain, heart, kidneys and muscles. After ingestion, more than 99% of the copper is excreted. Humans have well recorded homeostatic mechanisms to control excess copper levels in the body by a combination of decreased absorption and increased excretion.

MOBILITY IN SOIL:

The degree of mobility of copper in the environment depends on the pH of ambient soils and waters. The higher the acidity, the more soluble copper salts are and, therefore more mobile. The distance that it can travel in the soil is limited by its strong absorption to many types of surfaces. Partitioning copper into air is negligible due to the low vapor pressure of copper salts.

PHOTOTOXICITY:

It is more water soluble at low pH (high acidity). It is important that this product be applied in a spray solution (such as water) at a pH above 6.0. If the solution is more acid, phytotoxicity could occur. Use as per guidelines recommended in the product label.

OTHER ADVERSE EFFECTS:

Environmental Fate	: small amounts of copper are necessary for the life and health of plants, animals and humans.
Animals	: Excessive doses are excreted. Small amounts may be incorporated into natural proteins.
Soil	: Strongly absorbed by soil. Copper oxychloride is partly washed down to lower levels, partly bound by soil particles, and partly oxidatively transformed.

**13. CONSIDERATIONS ON FINAL DISPOSAL**

Product disposal	: Disposal of this product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Generation of waste should be avoided or minimised where possible.
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Avoid dispersal of spilled material.  
Avoid contact with soil, waterways, drains and sewers. Disposal of copper waste into waterways is not allowed.

Avoid excessive heat and incompatible materials: strong oxidising agents, mercury containing compounds, thiram, DNOC, lime sulphur and dithiocarbamates.

Disposal of contaminated containers / packaging : DO NOT dispose of undiluted chemicals on site. Puncture or and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

#### 14. TRANSPORT INFORMATION

UN No : UN3077

UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (84% dicopper chloride tryhydroxide), 9, UN3077, III.

Classification Code : M7

Class : 9

Packaging Group : III

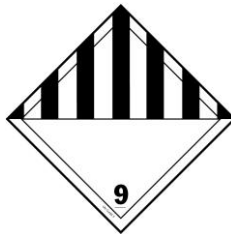
Hazard No. : 90

Transport Category : 3

Tunnel restriction code : E

Secondary risk : Marine Pollutant

#### PLACARDS



**15. REGULATORY INFORMATION**

APVMA Approval No. : 62910/53040

Marking on Label : Caution  
Keep out of reach of children  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING THIS  
PRODUCT

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**16. OTHER INFORMATION**

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