

# SAFETY DATA SHEET



## KOCIDE® 2000

Version 3.1

Revision Date 30.01.2017

Document no. 130000000296

This SDS adheres to the standards and regulatory requirements of India and may not meet the regulatory requirements in other countries.

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product name** : KOCIDE® 2000  
: Cu 35%

**Other names** : B11486799

**Recommended use of the chemical and restriction on use**

Recommended use : Fungicide

Restrictions on use : Do not use product for anything outside of the above specified uses.

**Manufacturer, importer, supplier, representative office**

Company : E. I. DuPont India Pvt. Ltd.

Street address : 7th Floor, Tower C, DLF Cyber Greens, Sector 25A, DLF City Phase III, Gurgaon -  
122002, Haryana  
India

Telephone : +91-124-2540900

Telefax : +91-124-2540889 / 90 / 91 / 92

**Emergency telephone number** : +91-124-4092888 / +91-124-2353777

### 2. HAZARDS IDENTIFICATION

**Product hazard classification**

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Serious eye damage/eye irritation : Category 2A

Acute aquatic toxicity : Category 2

Chronic aquatic toxicity : Category 1

Endpoints which are not classified, cannot be classified or are not applicable are not shown.

**Label content**

Pictogram :



Signal word : Warning

Hazardous warnings : Harmful if swallowed or if inhaled  
Causes serious eye irritation.  
Very toxic to aquatic life with long lasting effects.

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**Precautionary statements** : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear eye protection/ face protection.  
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/ attention.  
Collect spillage.  
Dispose of contents/ container to an approved waste disposal plant.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical nature** : Mixture

#### Components

Chemical name	CAS-No.	Concentration
Copper Hydroxide	20427-59-2	53.8 %
Other Ingredients		46.2 %

### 4. FIRST AID MEASURES

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

**Inhalation** : Remove person to fresh air. If signs/symptoms continue, get medical attention. Artificial respiration and/or oxygen may be necessary. Call a poison control center or doctor for treatment advice.

**Skin contact** : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Eye contact** : 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.

**Ingestion** : Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Do not give anything by mouth to an unconscious person.

**Most important symptoms/effects, acute and delayed** : No information available.

**Protection of first-aiders** : No information available.

**Notes to physician** : Probable mucosal damage may contraindicate the use of gastric lavage.

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**5. FIREFIGHTING MEASURES**

- Suitable extinguishing media** : Water spray, Dry chemical, Foam, Carbon dioxide (CO<sub>2</sub>)
- 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.

**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.

**7. HANDLING AND 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 : Store in a cool, dry place. Store product in original container only in a location

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conditions

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.

### 8. EXPOSURE CONTROLS/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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance (Physical state, form, colour, etc.)

Physical state : solid  
Form : solid, granular  
Colour : blue

**Odour** : characteristic copper odor

**Odour Threshold** : not determined

**pH** : 9.1 (10 g/l)

#### Melting point/freezing point

No information available.

#### Initial boiling point and boiling range

No information available.

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<b>Flash point</b>	: Not applicable
<b>Evaporation rate</b>	: No information available.
<b>Flammability (solid, gas)</b>	: Does not sustain combustion.
<b>Upper/lower flammability or explosive limits</b>	
Upper explosion limit	: No information available.
Lower explosion limit	: No information available.
<b>Vapour pressure</b>	: No information available.
<b>Vapour density</b>	: No information available.
<b>Density</b>	
Density	: 1.0417 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	
Water solubility	: 0.0029 g/l
<b>Partition coefficient: n-octanol/water</b>	: No information available.
<b>Auto-ignition temperature</b>	
Auto-ignition temperature	: 340 °C
<b>Decomposition temperature</b>	: No information available.
<b>Viscosity</b>	
Viscosity, kinematic	: No information available.
<b>Molecular weight</b>	: No information available.

### 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	: No information available.
<b>Chemical stability</b>	: Stable at normal temperatures and storage conditions.
<b>Possibility of hazardous reactions</b>	: No information available.
<b>Conditions to avoid</b>	: Temperature: > 140°C Avoid extreme heat.
<b>Materials to avoid</b>	: No information available.
<b>Hazardous decomposition products</b>	: Copper oxides

### 11. TOXICOLOGICAL INFORMATION

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**Acute toxicity**

Oral

KOCIDE® 2000 : LD50/Rat: 1,346 mg/kg

Inhalation

KOCIDE® 2000 : LC50/4 h/Rat(dust/mist): 1.311 mg/l

Dermal

KOCIDE® 2000 : LD50/Rabbit: &gt; 5,000 mg/kg

**Skin corrosion/irritation**KOCIDE® 2000 : Species: Rabbit  
Result: No skin irritation**Serious eye damage/eye irritation**KOCIDE® 2000 : Species: Rabbit  
Result: Irritating to eyes.**Respiratory or skin sensitisation**KOCIDE® 2000 : Species: Guinea pig  
Result: Animal test did not cause sensitization by skin contact.**Germ cell mutagenicity**

Copper Hydroxide : Weight of evidence does not support classification as a germ cell mutagen. Information given is based on data obtained from similar substances.

**Carcinogenicity**Copper Hydroxide : Not classifiable as a human carcinogen.  
Animal testing did not show any carcinogenic effects.  
Information given is based on data obtained from similar substances.**Reproductive toxicity**Copper Hydroxide : Reproductive toxicity: No toxicity to reproduction  
Animal testing did not show any effects on fertility.  
Information given is based on data obtained from similar substances.  
Teratogenicity: The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.  
Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.**Specific Target Organ Toxicity**

Specific target organ toxicity - repeated exposure

KOCIDE® 2000 : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.  
Refer to acute toxicity and/or repeated dose toxicity data for more information on target organs if applicable.**Aspiration hazard**

No information available.

**Other**Copper Hydroxide : Repeated dose toxicity:  
No toxicological effects warranting significant target organ toxicity

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classification were seen below the recommended guidance values for classification., The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral/Rat

Liver effects, Kidney effects, microcytic anemia

Information given is based on data obtained from similar substances.

Oral - feed/Rat

Spleen effects

Information given is based on data obtained from similar substances.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

Acute and prolonged toxicity to fish

KOCIDE® 2000 : LC50/96 h/Oncorhynchus mykiss (rainbow trout): 4.79 mg/l

Toxicity to aquatic plants

KOCIDE® 2000 : ErC50/72 h/Pseudokirchneriella subcapitata (green algae): 18.03 mg/l

Acute toxicity to aquatic invertebrates

KOCIDE® 2000 : EC50/48 h/Daphnia (water flea): 1.61 mg/l

Chronic toxicity to aquatic Invertebrates

KOCIDE® 2000 : NOEC/21 d/Daphnia magna (Water flea): 0.0025 mg/l  
Method: OECD Test Guideline 211  
(Data on the product itself), Information source: Internal study report

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

### Mobility in soil

No information available.

### Other adverse effects

KOCIDE® 2000 : See product label for additional application instructions relating to environmental precautions.

## 13. DISPOSAL CONSIDERATIONS

**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.

## 14. TRANSPORT INFORMATION

### IMDG

UN number : 3077

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UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Copper hydroxide)  
Transport hazard class : 9  
Packing group : III  
Hazchem Code : 2Z  
Marine pollutant : yes (Copper hydroxide)

### IATA

UN number : 3077  
UN proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Copper hydroxide)  
Transport hazard class : 9  
Packing group : III

Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises : Not applicable

## 15. REGULATORY INFORMATION

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

## 16. OTHER INFORMATION

### Sources of key data used to compile the Safety Data Sheet

1. The Factories Act, 1948, The Second Schedule: Permissible levels of certain chemical substances in work environment, as amended through April, 2001
2. Manufacture, Storage and Import of Hazardous Chemical Rules 1989, as amended through January 2000

### References

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Take notice of the directions of use on the label.

Significant change from previous version is denoted with a double bar.



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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.