

**DuPont™ Kocide® 2000 Fungicide/Bactericide**

Version 3.1

Revision Date 08/23/2013

Ref. 13000000296

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

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DuPont™ Kocide® 2000 Fungicide/Bactericide
Product Grade/Type : Cu 35%

Tradename/Synonym : DPX-GFJ52 35WG
Kocide WDG
Kocide WG
Kocide 53.8 DF
Kocide 53.8 WDG
Kocide Blue Extra
Kocide 35 DF
Kocide 35 WG
Coprantol Ultramicron
K53WDG
KDOS
CuPro
Oxford 2000
Ekoram 2000
Kocide 2000 35WG
B11486799

MSDS Number : 13000000296

Product Use : Fungicide

Manufacturer : DuPont
1007 Market Street
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview



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Warning

Causes substantial but temporary eye damage. Harmful if swallowed, inhaled or absorbed through skin. Do not get in eyes, on skin, or on clothing. Avoid breathing dust.

This product is toxic to fish. This product is toxic to: Aquatic invertebrates

Potential Health Effects

This section includes potential acute adverse effects which could occur if this material is not used according to the label.

- Skin : No adverse effects expected. There are no reports of human skin sensitization., Prolonged contact may cause:, Irritation.
- Eyes : Risk of serious damage to eyes. Irritation with discomfort, pain, redness, or visual impairment.
- Inhalation : May cause irritation of respiratory tract. Cough
- Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Metallic taste, Gross overexposure may cause:, Kidney failure, Bloody urine, anemia, Loss of consciousness.
- Repeated exposure
Quartz : DuPont has classified this material as a known human carcinogen.

**Carcinogenicity
Material**

	IARC	NTP	OSHA
Quartz	1	X	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

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


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Present as an impurity in the clay component of this product:

Quartz		<2 %
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SECTION 4. FIRST AID MEASURES

- Skin contact** : The material is not likely to be hazardous by skin contact, but cleaning the skin after use is advisable.
- 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.
- Inhalation** : Move 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 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.
- General advice** : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
For medical emergencies involving this product, call toll free 1-800-441-3637. See Label for Additional Precautions and Directions for Use.
- Notes to physician** : Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

- Flammable Properties**
- Flash point : not applicable
- Auto-ignition temperature : 340 °C (644 °F)

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- Suitable extinguishing media : Water spray, Dry chemical, Foam, Carbon dioxide (CO2)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)
- Firefighting Instructions : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.
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. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Safeguards (Personnel) : Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Use personal protective equipment.
- Spill Cleanup : 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.
- Accidental Release Measures : Prevent material from entering sewers, waterways, or low areas.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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- Handling (Physical Aspects) : Keep away from heat and sources of ignition.
- Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in original container. Store in a cool, dry place. Keep out of the reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Use only with adequate ventilation.
- Personal protective equipment
- Eye protection : Goggles, face shield, or safety glasses.
- Skin and body protection : Mixers, loaders, applicators and other handlers must wear:
Long sleeved shirt and long pants
Chemical resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber, or butyl rubber
Shoes plus socks
Protective eyewear
PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:
Long sleeved shirt and long pants
Chemical resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber, or butyl rubber
Shoes plus socks
Protective eyewear
- Protective measures : Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Use this product in accordance with its label.
- Exposure Guidelines
Exposure Limit Values

Copper Hydroxide



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AEL *	(DUPONT)	1.5 mg/m3	8 & 12 hr. TWA
Quartz PEL:	(OSHA)	2.4 millions of particles per cubic foot of air Respirable. Remarks	TWA The exposure limit is calculated from the equation, $250/(\%SiO_2+5)$, using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits.
PEL:	(OSHA)	0.1 mg/m3 Remarks	TWA Respirable. The exposure limit is calculated from the equation, $10/(\%SiO_2+2)$, using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits.
PEL:	(OSHA)	0.3 mg/m3 Remarks	TWA Total dust. The exposure limit is calculated from the equation, $30/(\%SiO_2+2)$, using a value of 100% SiO ₂ . Lower values of % SiO ₂ will give higher exposure limits.
TLV	(ACGIH)	0.025 mg/m3	TWA Respirable fraction.
AEL *	(DUPONT)	0.01 mg/m3	12 hr. TWA Respirable dust.
AEL *	(DUPONT)	0.02 mg/m3	8 hr. TWA Respirable dust.

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : solid, granular
 Color : blue
 Odor : characteristic copper odor


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pH : 8.6
 Oxidising Substance : The product is not oxidizing.
 Density : 1.0417 g/cm³
 Water solubility : 0.0029 g/l

SECTION 10. STABILITY AND REACTIVITY

Stability : Stable at normal temperatures and storage conditions.
 Conditions to avoid : Temperature > 140 °C (> 284 °F)
 Avoid extreme heat.
 Hazardous decomposition products : Copper oxides

SECTION 11. TOXICOLOGICAL INFORMATION

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Inhalation 4 h LC50 : 1.311 mg/l , rat

Dermal LD50 : > 5,000 mg/kg , rabbit

Oral LD50 : 1,346 mg/kg , rat

Skin irritation : No skin irritation, rabbit

Eye irritation : Irritating to eyes., rabbit

Sensitisation : Animal test did not cause sensitization by skin contact., guinea pig

Further information : No data is available on the product itself.

Copper Hydroxide

Repeated dose toxicity :

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



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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.

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Information given is based on data obtained from similar substances.

Mutagenicity : Evidence suggests this substance does not cause genetic damage in cultured bacterial cells.
Evidence suggests this substance does not cause genetic damage in animals.

Information given is based on data obtained from similar substances.

Reproductive toxicity : 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.

Quartz

Repeated dose toxicity : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Inhalation
Fluid retention in lungs (pulmonary oedema), lung effects,
Inflammation, Chronic lung disease, Fibrosis

Carcinogenicity : Human carcinogen.

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SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

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96 h LC50	:	Oncorhynchus mykiss (rainbow trout) 4.79 mg/l
72 h ErC50	:	Pseudokirchneriella subcapitata (green algae) 18.03 mg/l
48 h EC50	:	Daphnia 1.61 mg/l

Copper Hydroxide

90 d	:	NOEC 0.0017 mg/l
21 d	:	NOEC 0.03 mg/l

Additional ecological information : Environmental Hazards: 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 cleaning equipment or disposing of equipment washwaters or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. See product label for additional application instructions relating to environmental precautions.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal	:	Do not contaminate water, food or feed by disposal. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Container Disposal	:	Container Refilling and Disposal: Refer to the product label for instructions. Do not transport if this container is damaged or leaking.


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In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

SECTION 14. TRANSPORT INFORMATION

IATA_C	UN number	: 3077
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Copper hydroxide)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9MI
IMDG	UN number	: 3077
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper hydroxide)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Copper hydroxide)

Not regulated by DOT/49 CFR unless shipped in bulk package or by water.

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s)	: Copper Hydroxide
Title III hazard classification	: Acute Health Hazard: Yes Chronic Health Hazard: No Fire: No Reactivity/Physical hazard: No Pressure: No
EPA Reg. No.	: 352-656



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In the United States this product is regulated by the US Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

- California Prop. 65 : WARNING! This product contains a chemical or chemicals known to the State of California to cause cancer.
WARNING! This product contains a chemical or chemicals known to the State of California to cause birth defects or other reproductive harm.
- PA Right to Know : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Regulated Chemical(s) Substances): Limestone , Tetrasodium pyrophosphate , Quartz , Disodium hydrogenorthophosphate

SECTION 16. OTHER INFORMATION

	NFPA	HMIS
Health :	2	2
Flammability :	1	1
Reactivity/Physical hazard :	0	0

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Contact person : DuPont Crop Protection, Wilmington, DE, 19898, Phone: 1-888-638-7668

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