



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

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M0000606 "DuPont" "KOCIDE" 3000 FUNGICIDE/BACTERICIDE
Revised 30-JAN-2007

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"KOCIDE" is a registered trademark of DuPont.

Tradenames and Synonyms

GX-569
Kocide Opti
DPX-GFJ52
COPPER HYDROXIDE

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

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

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
COPPER HYDROXIDE*	20427-59-2	46.1
INERT INGREDIENTS		53.9

Components (Remarks)

(*Metallic Copper Equivalent 30%)

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION. Causes moderate eye irritation. Harmful if swallowed, absorbed through the skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling.

(HAZARDS IDENTIFICATION - Continued)

Potential Health Effects

No adverse effects are expected from incidental skin contact. Excessive exposure, especially if prolonged, may produce skin irritation. While there are no reports of human skin sensitization with GX-569, there are inconclusive or unverified reports of human sensitization with the active ingredient, copper hydroxide.

Eye contact may cause eye irritation with tearing, pain or blurred vision.

Inhalation may cause irritation of the upper respiratory passages, with coughing.

Ingestion may cause nonspecific discomfort, such as nausea or weakness, central nervous system depression, which, if severe enough, may lead to death.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

IF IN EYES: 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.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person 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 further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

(FIRST AID MEASURES - Continued)

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 Physicians

Probable mucosal damage may contraindicate use of gastric lavage.

FIRE FIGHTING MEASURES

Flammable Properties

Hazardous Combustion Products : Decomposes to CuO and H₂O above 140°C.

Extinguishing Media

Dry Chemical, CO₂, Water Spray, Foam.

Fire Fighting Instructions

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

Cool tank/container with water spray.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

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

Initial Containment

Prevent material from entering sewers, waterways, or low areas. Follow applicable Federal, State/Provincial and Local laws/regulations.

Spill Clean Up

Shovel or sweep up. Avoid causing dust. Dispose of in an approved container.

(ACCIDENTAL RELEASE MEASURES - Continued)

Land Spill: Sweep up and place in suitable (fiberboard) containers for later disposal.

Water Spill: If feasible, copper may be precipitated/-ultrafiltrated with caustics or other chemicals and resulting sludge disposed of in a chemical landfill.

HANDLING AND STORAGE

Handling (Personnel)

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Storage

Do not contaminate water, food or feed by storage. Store in a cool, dry place. Keep out of reach of children.

Store below 35°C (95°F). Average shelf life under proper storage conditions is 2 years.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation.

Personal Protective Equipment

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

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:

- Coveralls.
- Chemical-resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber, or butyl rubber.
- Shoes plus socks.

Exposure Guidelines

Applicable Exposure Limits

COPPER HYDROXIDE*

PEL (OSHA)	: 1 mg/m3, dusts and mists, as Cu, 8 Hr. TWA
TLV (ACGIH)	: 1 mg/m3, dusts and mists, as Cu, 8 Hr. TWA
AEL * (DuPont)	: 1.5 mg/m3, 8 & 12 Hr. TWA (approximately 1 mg/m3, as Cu)

* 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.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Form	: Solid
Color	: Medium blue
Physical State	: Granular
Density	: 0.7123
pH	: 8.27 (1% dispersion in water)
Solubility in Water	: Technical copper hydroxide has a solubility of 0.1 - 5 ppm.

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Decomposition

Decomposes to CuO and H2O above 140°C.

(STABILITY AND REACTIVITY - Continued)

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

GX-569

Oral LD50: 1847 mg/kg in rats
Dermal LD50: > 2000 mg/kg in rats
4-Hour Inhalation LC50: > 2.08 mg/L in rats

GX-569 is moderately irritating to the rabbit eye but is not a skin irritant or skin sensitizer in animals.

COPPER HYDROXIDE

Repeated oral ingestion of copper hydroxide via gavage produced reduced body weights and food consumption at 15 mg/kg/day and mortality at 30 mg/kg/day in rabbits.

No animal data are available to define carcinogenic, reproductive, or mutagenic hazards of copper hydroxide. Animal data show developmental effects only at exposure levels producing other toxic effects in the adult animal.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

96 hour LC50 - Rainbow trout: 0.24 mg/L.
48 hour EC50 - Daphnia magna: 118.0 ug/L.
72 hour, EC50, Freshwater algae: 19.98 - 51.59 ug/L.

AVIAN TOXICITY:

Acute Oral LD50 - Bobwhite Quail: 822 mg/kg.
Acute Oral LD50 - Honeybee: 9.9 ug/bee.

DISPOSAL CONSIDERATIONS

Waste Disposal

Do not contaminate water supply, food or feed by storage or disposal.

(DISPOSAL CONSIDERATIONS - Continued)

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.

ENVIRONMENTAL HAZARDS:

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not contaminate water by disposal of equipment washwaters.

Container Disposal

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

TRANSPORTATION INFORMATION

Shipping Information

Department of Transportation (DOT):

Proper Shipping Name : Not Regulated by DOT unless shipped in bulk package or by water. See IMO/IMDG description.

IMO/IMDG:

Proper Shipping Name : Environmentally Hazardous Substances, Solid, n.o.s., (Copper Hydroxide).
Hazard Class : 9
UN/NA Number : UN 3077
Packing Group : III
Marine Pollutant : Yes
Reportable Quantity : No

IATA/ICAO : Not Regulated

NOTE: Inhalation data generated using a smaller particle size than is reasonably foreseeable to be encountered by a human during transport. Since less than 10% of this substance is dust in a respirable range, this material is not regulated for transport per DOT 49CFR 173.132 (b)(3), IATA 3.6.1.5.3, IMDG 2.6.2.1.3.

REGULATORY INFORMATION

U.S. Federal Regulations

In the United States this product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-662

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : No
Fire : No
Reactivity : No

SARA TITLE III

313 Reportable Ingredients: This product contains a percentage of metallic copper (CAS No. 7440-50-8) that is listed in Section 313 above deminimis concentrations.

OSHA:

This product is considered hazardous under the OSHA Hazardous Communication Standard (29 CFR §1910.1200).

TSCA:

All product components are on the TSCA Chemical Inventory.

CERCLA:

Reportable quantity under CERCLA is 5000 lbs. for copper (CAS No. 7440-50-8). No reportable quantities found for copper containing pesticide (CAS No. 10290-12-7) or copper hydroxide (CAS No. 20427-59-2). No reportable quantities found for other components of this product.

RCRA:

When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR §261.33.

STATE REGULATIONS

California:

Listed under copper (CAS No. 7440-50-8) with footnotes referencing above federal standards.

New Jersey:

Footnotes reference above federal standards plus listing of copper on the New Jersey Environmental Hazardous Substances List (NJ Department of Environmental Protection, Title 7 New Jersey Administrative Code (NJAC) Chapter 1G).

Massachusetts:

(REGULATORY INFORMATION - Continued)

Listed as copper (CAS No. 7440-50-8) and copper-based pesticide, solid, toxic (no CAS No. assigned).

Pennsylvania:

Listed as copper fume or dust (CAS No. 7440-50-8) as an environmental hazard.

OTHER INFORMATION

NFPA, NPCA-HMIS

HAZARDS CLASSIFICATION:

(0-minimal, 1-slight, 2-moderate, 3-serious, 4-severe)

NFPA: HEALTH-2 FIRE-1 REACTIVITY-0

HMIS: HEALTH-2 FIRE-1 REACTIVITY-0

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS: DuPont Crop Protection
Address : Wilmington, DE 19898
Telephone : 1-888-638-7668

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS