



Material Safety Data Sheet

United Phosphorus, Inc.

NFPA	PPE		

Issued Date 02-Nov-2007

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Revision Number: 9

1. PRODUCT AND COMPANY IDENTIFICATION

UPI
 630 Freedom Business Center
 Suite 402
 King of Prussia, PA 19406

Emergency Telephone Number
 Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
 Medical: Rocky Mountain Poison Control Center
 (866) 673-6671 (24hrs)

Company Information
 UPI

Contact Information
 Customer Service
 R&D Technical Service

Phone Number
 1-800-438-6071
 610-878-6100

Available Hrs
 8:00 am to 5:00 pm EST
 8:00 am - 5:00 pm (EST)

Product Name PENNCOZEB® 75 DF
EPA Reg # 70506-185
Recommended Use fungicide
Product Code 12-370

2. HAZARDS IDENTIFICATION

Emergency Overview

Mild eye irritation
Harmful by inhalation, in contact with skin and if swallowed

CAUTION

Appearance Grey, Yellow, Brown.

Physical State Free flowing microgranules.

Odor Slight. Rotten egg-like.

Potential Health Effects

- Inhalation
- Skin contact

Eyes

May cause slight irritation.

Skin

Irritating to skin.

Inhalation

Slightly toxic if inhaled.

Ingestion

Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Zinc manganese ethylenebis dithiocarbamate	8018-01-7	75	N/A
Ethylene thiourea	96-45-7	0-0.5	N/A

4. FIRST AID MEASURES

Eye Contact

Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.
Call a poison control center or doctor for treatment advice.

Skin Contact

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

Inhalation

Move person to fresh air.
If person is not breathing, call 911 or an ambulance, then give artificial respiration.
Call a poison control center or doctor for further treatment advice.

Ingestion

Call a physician or Poison Control Center immediately
Have person sip a glass of water if able to swallow
Do not induce vomiting unless told to do so by a poison control center or doctor
Never give anything by mouth to an unconscious person

Notes to Physician

No information available

5. FIRE-FIGHTING MEASURES

Flammable Explosive Properties

Flash Point Not available
Autoignition Temperature 159°C

Flammability Limits in Air Not available

Extnguishing Media Use: Water spray, Carbon dioxide (CO2), Dry chemical.

Fire/Explosion Hazard Firefighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear and self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use.

Hazardous Combustion Products If heated to decomposition (>235 F) flammable ethylene is produced.

NFPA

Health 2

Flammability 0

Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with the skin and the eyes. Ensure adequate ventilation.

Environmental Precautions Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.. Do not flush into surface water or sanitary sewer system.

Methods for Clean-up Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling Avoid breathing dust. Keep out of reach of children. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage Keep tightly closed in a dry and cool place. If allowed to become wet the product will deteriorate and represent a fire hazard.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Engineering Controls

Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. .

PESTICIDE APPLICATORS & WORKERS. THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170..

Personal Protective Equipment

Eye/face Protection

Avoid contact with eyes. Goggles.

Skin Protection

Long sleeved clothing. Long pants. Coveralls. Chemical resistant gloves. waterproof gloves. Socks and footwear.

Respiratory Protection

Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134. .

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Grey Yellow Brown	Odor	Slight Rotten egg-like
Physical State	Free flowing microgranules	pH	(1% solution)6.9
Boiling Point/Range	Not available	Melting Point/Range	Decomposes before melting
Specific Gravity	Not available	Solubility	Dispersible in water
Evaporation Rate	Not available	Vapor Pressure	Not available
Vapor Density	Not available	VOC Content	Not available
Viscosity	Not available	Molecular Weight	No data available
Bulk Density	0.63 g/ml	Percent Solids	Not available
Percent Volatiles	Not available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions
Conditions to Avoid	Protect from water.
Incompatible Materials	Strong acids. Strong oxidizing agents. Water. quaternary ammonium salts. EDBC sequestering agents.
Hazardous Decomposition Products	carbon disulfide, ethylene thiourea.
Possibility of Hazardous Polymerization	Hazardous polymerisation does not occur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Maneb

Single exposure studies indicate that this material is practically non-toxic if swallowed (rat LD50 >5,000 mg/kg), no more than slightly toxic if absorbed through skin (rabbit LD50>2,000 mg/kg), practically non-toxic if inhaled (rat 4 hr LC50 5.34-7.38 mg/l) and slightly irritating to rabbit eyes and skin.

An increased risk of retinal degeneration was observed in some workers. Skin allergy has been observed in guinea pigs following repeated exposure. Repeated and long-term oral administration produced adverse effects on the thyroid in mice, rats, and dogs. Long-term oral administration produced an increased incidence of lung tumors in mice and one strain, but not in three other strains. No effects were seen on the ability of male and female rats to reproduce when exposed orally for multiple generations, although adverse effects were noted in the liver and thyroid. Developmental delays, but not birth defects, were observed in the offspring of rats exposed orally during pregnancy, but only at doses that produced adverse effects on the mothers. No genetic changes were observed in tests using bacteria, animal cells or animals.

Chronic Toxicity

Carcinogenicity

The information below indicates whether any agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethylene thiourea			X	

IARC: (International Agency for Research on Cancer)

A trace contaminant, Ethylene thiourea (ETU) a breakdown product of Maneb, has been categorized as a probable human carcinogen by NTP.

12. ECOLOGICAL INFORMATION

Ecotoxicity

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or 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. . Dispose of contents/container in accordance with local regulation.

Contaminated Packaging

Non refillable container. Do not reuse this container. . Completely empty bag into application equipment. Then offer for recycling if available or 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. .

14. TRANSPORT INFORMATION

DOT When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated.
When shipped in bulk, by vessel, or internationally use the following shipping description:

ICAO

UN-No	UN3077
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s (Mancozeb)
Hazard Class	9
Packing Group	PG III

IATA

UN-No	3077
Proper Shipping Name	Environmentally hazardous substances, solid, n.o.s. (Mancozeb)
Hazard Class	9
Packing Group	PG III
ERG Code	9L

IMDG/IMO

Proper Shipping Name	Environmentally hazardous substances, solid, n.o.s. (Mancozeb)
Hazard Class	9
UN-No	3077
Packing Group	PG III
Marine Pollutant	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

15. REGULATORY INFORMATION

International Inventories

Zinc manganese ethylenebis dithiocarbamate

ENCS	Listed
CHINA	Listed
KECL	Listed

Ethylene thiourea

DSL	Listed
EINECS/ELINCS	Listed
ENCS	Listed
CHINA	Listed
KECL	Listed

USA**Federal Regulations**

SARA 313

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Chemical Name	CAS-No	Weight %
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12-370 - PENNCOZEB® 75 DF

Zinc manganese ethylenebis dithiocarbamate	8018-01-7	75
Ethylene thiourea	96-45-7	0-0.5

SARA 311/312 Hazardous Categorization

Chronic Health Hazard	No
Acute Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Zinc manganese ethylenebis dithiocarbamate	8018-01-7	75	Listed.			
Ethylene thiourea	96-45-7	0-0.5	Listed.			

CERCLA

Chemical Name	RQ
Zinc manganese ethylenebis dithiocarbamate	Listed.
Ethylene thiourea	Listed.

RCRA

Chemical Name	RCRA - D Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ethylene thiourea			U116

Pesticide Information

State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	Category	California Prop. 65
Zinc manganese ethylenebis dithiocarbamate	8018-01-7		Listed. Listed: January 1, 1990 Carcinogenic.
Ethylene thiourea	96-45-7		Listed. Listed: January 1, 1988 Carcinogenic. Listed: January 1, 1993 Developmental toxin. 20 ug/day

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island

Zinc manganese ethylenebis dithiocarbamate		Substance no. 2370 Listed. Substance no. 2369 Listed. Substance no. 2371 Listed. Substance no. 2372 Listed. Substance no. 2324 Listed.		Listed.	Listed.
Ethylene thiourea	Listed.	Substance no. 0883 Listed. Substance no. 0883 Special hazard.	Listed.	Listed.	Listed.

International Regulations

Mexico - Grade Not available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

WHMIS Hazard Class

Chemical Name	NPRI
Zinc manganese ethylenebis dithiocarbamate	X
Ethylene thiourea	X

16. OTHER INFORMATION

Revision Date 23-Dec-2010

Revision Summary

Update section 13 Update section 8

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End of MSDS