



Material Safety Data Sheet

United Phosphorus, Inc.

NFPA	PPE		

Issued Date 07-Feb-2007

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Revision Number: 2

12-358A - Penncozeb T&O

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) 767-5089 (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 T&O

EPA Reg #

70506-182

Recommended Use

fungicide

Product Code

12-358A

2. HAZARDS IDENTIFICATION

Emergency Overview

Mild eye irritation

Harmful by inhalation, in contact with skin and if swallowed

CAUTION

Appearance Grey, Green, Yellow.

Physical State Powder.

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

May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Sodium lauryl sulfate	151-21-3	5	N/A
Zinc manganese ethylenebis dithiocarbamate	8018-01-7	80	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 Centre 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 152°C

Flammability Limits in Air
 Lower 80 g/m³ (for dust in air)

Extinguishing Media Use: Water spray Carbon dioxide (CO2) Foam 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 Carbon disulfide, ethylene thiourea (ETU) , If heated to decomposition (>235 F) flammable ethylene is produced.

NEPA Health 2 **Flammability** 0 **Instability** 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with skin, eyes and clothing. Avoid dust formation. Use personal protective

equipment.

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 dust formation. Avoid breathing dust. Keep out of reach of children. 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. .

Personal Protective Equipment

Eye/face Protection

Skin Protection

Respiratory Protection

Avoid contact with eyes. Goggles.
 Rubber gloves. Wear protective gloves/clothing.
 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 Green Yellow	Odor	Slight Rotten egg-like
Physical State	Powder	pH	(1% solution) approx.7
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	0.59 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.

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 is 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

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

Carcinogenicity

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

Chem Fate: No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method

Dispose of contents/container in accordance with local regulation. 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.

Contaminated Packaging

Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT

When shipped in bulk use IMDG shipping description

ICAO

Not regulated

IATA

Not regulated

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

Sodium lauryl sulfate

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

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**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Chronic Health Hazard	Yes
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	80	Listed.			
Ethylene thiourea	96-45-7	0-0.5	Listed.			

CERCLA**RCRA****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.
Ethylene thiourea	96-45-7		Listed.

State Right-to-Know

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Zinc manganese ethylenebis dithiocarbamate				Listed.	
Ethylene thiourea	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

Not determined

Chemical Name	NPRI
Zinc manganese ethylenebis dithiocarbamate	X
Ethylene thiourea	X

16. OTHER INFORMATION

Revision Date 08-Nov-2007

Revision Summary

Update logo Add information on previous EPA registration number

Miscellaneous

UPI has acquired Cerexagri, Inc. The previous EPA assignment for this product: 4581-357

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End of MSDS