

**MATERIAL SAFETY DATA SHEET**

Phoenix Environmental Care, LLC  
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General Information No.  
In Case of Emergency, Call  
PROSAR:

229-245-8845  
888-875-1724

**I. PRODUCT IDENTIFICATION**

Product Name: WingMan (75.0%)  
Active ingredient: Mancozeb

**II. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Component</u>	<u>CAS Number</u>	<u>% by Wt.</u>
Sodium lauryl sulfate	151-21-3	5
Zinc manganese ethylenebis dithiocarbamate	8018-01-7	80
Ethylene thiourea	96-45-7	0-0.5

**III. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

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

**POTENTIAL HEALTH EFFECTS**

- Inhalation
- Skin contact

Eye: May cause slight irritation.  
Skin: Irritating to skin.  
Inhalation: Slightly toxic if inhaled.  
Ingestion: May be harmful if swallowed.

**IV. FIRST AID MEASURES**

If Swallowed: Immediately 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 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 by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

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 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.

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**V. FIRE FIGHTING MEASURES**

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Flash point:	Not available		
Autoignition Temperature:	152° C		
Flammable Limits (LFL):	Lower 80 g/m <sup>3</sup> (for dust in air)		
Extinguishing Media:	Water spray Carbon dioxide (CO <sub>2</sub> ) Foam Dry chemical		
Fire and Explosion Hazards:	Firefighters and other who may be exposed to products of combustion should wear a 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.		
NFPA:	Health 2	Flammability 0	Instability 1

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**VI. ACCIDENTAL RELEASE MEASURES**

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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 of 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 spills and shovel into suitable containers for disposal.

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**VII. HANDLING AND STORAGE**

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Handling:	Avoid dust formation. Avoid breathing dust. Keep out of the 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.

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**VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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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.
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Personal Protective Equipment:

Eye/face Protection:	Avoid contact with eyes. Goggles.
Skin Protection:	Rubber gloves. Wear protective gloves/clothing.
Respiratory Protection:	Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full face piece 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.

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**IX. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance:	Grey green yellow
Physical State:	Powder
Odor:	Slight rotten egg-like
pH:	(1% solution) approx. 7
Melting Point/Range:	Decomposes before melting
Bulk Density:	0.59 g/mL
Solubility in Water:	Dispersible

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**X. STABILITY AND REACTIVITY**

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Stability:	Stable under recommended storage conditions.
Conditions to avoid:	Protect from water.
Incompatibility with other materials:	Strong acids. Strong oxidizing agents. Water. Quaternary ammonium salts.
Hazardous decomposition products:	Carbon disulfide, ethylene thiourea.
Polymerization:	Hazardous polymerization does not occur.

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**XI. TOXICOLOGICAL INFORMATION**

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Maneb	
Acute oral toxicity:	LD <sub>50</sub> (rat): > 5,000 mg/kg; practically non-toxic if swallowed
Acute dermal toxicity:	LD <sub>50</sub> (rabbit): > 2,000 mg/kg; slightly toxic if absorbed
Acute inhalation toxicity:	LC <sub>50</sub> (rat, 4 hr): 5.34-7.38 mg/L
Eye irritant:	Rabbit – slight irritant
Skin irritation:	Rabbit – slight irritant
Sensitization:	Guinea pig – skin allergy observed following repeat exposure.

An increased risk of retinal degeneration was observed in some workers. 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: A trace contaminant, Ethylene thiourea (ETU) a breakdown product of Maneb, has been categorized as a probable human carcinogen by NTP.

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**XII. ECOLOGICAL INFORMATION**

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Chem Fate: No information available

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**XIII. DISPOSAL CONSIDERATIONS**

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Pesticide Disposal: 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.

Container Disposal: Empty containers should be taken for local recycling, recovery or waste disposal.

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**XIV. TRANSPORT INFORMATION**

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DOT: When shipped in bulk use IMDG shipping description.  
ICAO: Not regulated  
IATA: Not regulated

IMDG/IMO  
Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S. Mancozeb  
Hazard Class or Division: 9  
UN/NA Number: 3077  
Packing Group: PG III  
Marine Pollutant: This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO.

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**XV. REGULATORY INFORMATION**

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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

U.S. 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 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 contain all the information required by the CPR.

WHMIS Hazard Class

Not determined.

Chemical Name	NPRI
Zinc manganese ethylenebis dithiocarbamate	X
Ethylene thiourea	X

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**XVI. OTHER INFORMATION**

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

**DISCLAIMER:**

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