

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier**Product Description:** Wingman Fern 75WDG**Other means of identification****Product code** 12-394E
Registration number(s) 70506-269**Recommended use of the chemical and restrictions on use****Recommended use** Fungicides.
Uses advised against Activities contrary to label recommendation**Details of the Supplier of the Safety Data Sheet****Supplier Address**UPL NA Inc.
630 Freedom Business Center
Suite 402
King of Prussia, PA 19406**Emergency telephone number****Company Phone Number** 1-800-438-6071
Emergency telephone number Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 673-6671 (24hrs)

2. Hazards Identification

Classification**OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 1
Acute toxicity - Dermal	Category 1
Skin sensitization	Category 1
Reproductive Toxicity	Category 1B

Label elements**EMERGENCY OVERVIEW****DANGER****Hazard Statements**FATAL IF SWALLOWED
Fatal in contact with skin
May cause an allergic skin reaction
May damage fertility or the unborn child

Appearance grey Yellow brown**Physical state** Free flowing
microgranules**Odor** Slight Rotten egg-like**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood
 Wear cold insulating gloves/face shield/eye protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not get in eyes, on skin, or on clothing
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 IF ON SKIN: Gently wash with plenty of soap and water
 Immediately call a POISON CENTER or doctor/physician
 Remove/Take off immediately all contaminated clothing
 Wash contaminated clothing before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)**OTHER INFORMATION**

- Causes mild skin irritation
- Very toxic to aquatic life

3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Zinc manganese ethylenebis dithiocarbamate	8018-01-7	75
Ethylene thiourea	96-45-7	0-0.5
Sodium diisopropyl naphthalene sulfonate	1332-93-6	2.07

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. First aid measures

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 a poison control center or doctor for treatment advice. Remove and wash contaminated clothing before re-use.

Inhalation

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.

Ingestion Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects no data available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to physician No information available.

5. Fire-fighting measures

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media no data available.

Specific hazards arising from the chemical

No information available.

Hazardous combustion products If heated to decomposition (>235 F) flammable ethylene is produced.

Explosion data

Protective equipment and precautions for firefighters

Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with skin and eyes. Provide adequate ventilation.

Environmental Precautions

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 and material for containment and cleaning up

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

7. Handling and Storage

Precautions for safe handling

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.

Conditions for safe storage, including any incompatibilities

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

incompatible materials Strong acids. Strong oxidizing agents. Aquatic. quaternary ammonium salts. EDBC sequestering agents.

8. Exposure Controls/Personal Protection

Exposure guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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	Use eye protection to avoid eye contact. Where there is potential for eye contact have eye flushing equipment available. Safety glasses with side-shields. If splashes are likely to occur, wear:. Goggles.
Skin protection	Socks and footwear. 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 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
 Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Free flowing microgranules	Odor	Slight Rotten egg-like
Appearance color	grey Yellow brown No information available		
Property	VALUES	Remarks/ • Method	
pH	6.9		
Melting point/freezing point	7.9 °C / 46 °F		
Boiling Point/Range	No information available		
Flash Point			
Evaporation Rate	No information available		
Flammability (solid, gas)	No information available		
Flammability limit in air			
Upper Flammability Limit	No information available		
Lower Flammability Limit	No information available		
vapor pressure	No information available		
Vapor Density	No information available		
Specific gravity	No information available		
Water solubility	No information available		
Solubility in Other Solvents	No information available		
Partition coefficient: n-octanol/water	No information available		
Autoignition temperature	159 °C / 318 °F		
Decomposition temperature	No information available		
Viscosity, kinematic	No information available		
Dynamic viscosity	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		

OTHER INFORMATION

Softening point	No information available
molecular weight	No information available
VOC Content	No information available
Liquid Density	No information available
Bulk density	0.63 g/ml

10. Stability and Reactivity**Reactivity**

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Protect from water.

incompatible materials

Strong acids. Strong oxidizing agents. Aquatic. quaternary ammonium salts. EDBC sequestering agents.

Hazardous decomposition products

Lead oxides.

11. Toxicological Information**Information on Likely Routes of Exposure**

Product information	Mancozeb: Acute oral LD50 (rat) = >5.0 g/kg Acute dermal LD50 (rabbit) = >2.0 g/kg Acute Inhalation LC50 (rat) = >5.2 mg/L - 4 hr
Inhalation	May be harmful if inhaled. May cause irritation of respiratory tract.
Eye contact	Irritating to eyes.
Skin contact	Irritating to skin.
Ingestion	MAY BE HARMFUL IF SWALLOWED.

Information on Toxicological Effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization by skin contact.
Mutagenic effects no data available.
Carcinogenicity The information below indicates whether any agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Ethylene thiourea 96-45-7	-	Group 3	Reasonably Anticipated	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.

Reproductive effects	May damage fertility or the unborn child.
STOT - Single Exposure	no data available.
STOT - Repeated Exposure	no data available.
Aspiration hazard	No information available.

Numerical Measures of Toxicity - Product information

LD50 Oral	> 5 g/kg (rat)
LD50 Dermal	> 2 g/kg (rat)
LC50 Inhalation	LC50/inhalation/4h/rat = > 5.2 mg/l (rat)

12. Ecological Information

ecotoxicity

Mancozeb = Rainbow trout = 0.73 mg/L 96 hr
 Fathead minnow 0.57 mg/L 96 hr
 Bluegill sunfish = 0.84 mg/L 96 hr
 Freshwater algae = 0.43 mg/L 72 hr

Persistence/Degradability

no data available.

Bioaccumulation/ Accumulation

No information available.

Other Adverse Effects

no data available

13. Disposal Considerations

Waste Treatment Methods

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 Refer to product label.

14. Transport Information

DOT Not regulated when shipped domestically by highway in non-buk containers as per 49 CFR 171.4

When shipped in bulk, by vessel, or internationally use the IMDG shipping description:

TDG When shipped in Canada domestic highway non-bulk this product can be shipped as Not regulated as per TDG 1.45.1

UN/ID no.	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Mancozeb)
Hazard class	9
Packing group	PG III
Marine Pollutant: Y or N [List	Marine pollutant.

Ingredient(s) with %]**IATA**

UN/ID no.	UN3077
Proper shipping name	Environmentally hazardous substances, solid, n.o.s Mancozeb
Hazard class	9
Packing group	PG III
Description	IMDG - Marine Pollutant

IMDG

UN/ID no.	UN3077
Proper shipping name	Environmentally hazardous substances, solid, n.o.s (Mancozeb)
Hazard class	9
Packing group	PG III
Environmental hazards	IMDG - Marine Pollutant

15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

signal word CAUTION

Ventilation Control 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.

Keep out of Reach of Children. May irritate eyes, nose, throat and skin. Harmful if swallowed. Harmful if inhaled or absorbed through skin. Toxic to fish.

International Inventories

USINV	Not present
DSL/NDSL	Not present
EINECS/ ELINCS	Not Present
ENCS	Not Present
China	Not Present
KECL	Not Present
PICCS	Not Present
AICS	Not Present
TSCA	Not Present

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

CERCLA

Not applicable

Chemical name	RQ	CERCLA EHS RQs	RQ
Ethylene thiourea 96-45-7	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ

CERCLA

Component	RQ
Ethylene thiourea 96-45-7 (0-0.5)	10 lb

SARA Product RQ 0

RCRA

Component	RCRA - D Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ethylene thiourea 96-45-7 (0-0.5)			U116

Pesticide Information

State Regulations

Component	CAS No	CATEGORY
Zinc manganese ethylenebis dithiocarbamate 8018-01-7 (75)	8018-01-7	Carcinogen
Ethylene thiourea 96-45-7 (0-0.5)	96-45-7	Carcinogen

Prop 65 Pictogram



**Prop 65 Warning Statement
California Proposition 65**

WARNING!
This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Component	California Prop. 65	Non-additive, corrosive chemical type
Zinc manganese ethylenebis dithiocarbamate 8018-01-7 (75)	Carcinogen	
Ethylene thiourea 96-45-7 (0-0.5)	Carcinogen Developmental	

State Right-to-Know

Not applicable

International regulations

U.S. EPA Label information

EPA Pesticide registration number 70506-269

16. Other Information

NFPA HEALTH 2 flammability 0 Instability 0 Physical hazard -

Preparation Date 12-Jan-2016

Revision date 03-Jan-2019

Revision Summary

Update logo Update section 1 Update Section 16***

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