



United Phosphorus, Inc.

<b>NFPA</b>	<b>PPE</b>		

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Revision Number: 1

**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)

<u>Company Information</u>	<u>Contact Information</u>	<u>Phone Number</u>	<u>Available Hrs</u>
UPI	Customer Service R&D Technical Service	1-800-438-6071 610-878-6100	8:00 am to 5:00 pm EST 8:00 am - 5:00 pm (EST)

**Product Name** Manzate Max T & O Fungicide  
**EPA Reg #** 70506-194  
**Recommended Use** fungicide  
**Product Code** 12-394XX

**2. HAZARDS IDENTIFICATION**

<b>Emergency Overview</b> Mild eye irritation Harmful by inhalation, in contact with skin and if swallowed		
<b>CAUTION</b>		
<b>Appearance</b> Yellow, Green.	<b>Physical State</b> Liquid.	<b>Odor</b> Pungent.

**Potential Health Effects**

- Inhalation
  - Skin contact
- |                   |                              |
|-------------------|------------------------------|
| <b>Eyes</b>       | Irritating to eyes.          |
| <b>Skin</b>       | Irritating to skin.          |
| <b>Inhalation</b> | Slightly toxic if inhaled.   |
| <b>Ingestion</b>  | May be harmful if swallowed. |



## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Avoid contact with the skin and the eyes. Use personal protective equipment.
<b>Environmental Precautions</b>	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.
<b>Methods for Clean-up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin, eyes and clothing. Keep out of reach of children.
<b>Storage</b>	Keep tightly closed in a dry and cool place. Keep in properly labelled containers.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Engineering Controls</b>	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.
<b>Personal Protective Equipment</b>	
<b>Eye/face Protection</b>	Avoid contact with eyes. Goggles.
<b>Skin Protection</b>	Coveralls. Long sleeved clothing. Long pants. Chemical resistant gloves. waterproof gloves. Socks and footwear.
<b>Respiratory Protection</b>	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.
<b>General Hygiene Considerations</b>	Do not eat, drink or smoke when using this product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Yellow Green	<b>Odor</b>	Pungent
<b>Physical State</b>	Liquid	<b>pH</b>	8
<b>Boiling Point/Range</b>	Not available	<b>Melting Point/Range</b>	Not available
<b>Specific Gravity</b>	1.27-1.33	<b>Solubility</b>	Dispersible in water
<b>Evaporation Rate</b>	Not available	<b>Vapor pressure</b>	Not available
<b>Vapor Density</b>	Not available	<b>VOC Content</b>	Not available
<b>Viscosity</b>	Not available	<b>Molecular Weight</b>	no data available
<b>Bulk Density</b>	1270 kg/m <sup>3</sup>	<b>Percent Solids</b>	Not available
<b>Percent Volatiles</b>	Not available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions
<b>Conditions to Avoid</b>	No information available
<b>Incompatible Materials</b>	Strong oxidizing agents Strong acids quaternary ammonium salts EDBC sequestering agents
<b>Hazardous Decomposition Products</b>	Oxides of carbon and nitrogen Oxides of sulfur
<b>Possibility of Hazardous Polymerization</b>	Hazardous polymerisation does not occur

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

<b>Product Information</b>	<b>Manzate Max=</b> <b>Acute oral LD50 = &gt;5,000 mg/kg</b> <b>Acute dermal LD50 = &gt;5,000 mg/kg</b> <b>Acute inhalation LC50 = &gt;2.02 mg/L</b> <b>Eye irritation = Slight</b> <b>Dermal irritation = Slight</b> <b>Skin sensitizer = Not a sensitizer</b>
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### 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		Group 3	Reasonably Anticipated	X

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Mancozeb:

Aquatic toxicity:

96 hour LC50 = rainbow trout 0.73 mg/L

96 hour LC50 = fathead minnows 0.57 mg/L

96 hour LC50 = Bluegill sunfish 0.84 mg/L

72 hour EC50 = freshwater algae = 0.43 mg/L.

## 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. Triple rinse (or equivalent) promptly after emptying. Refer to product label.

## 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

<b>UN-No</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substance, liquid, n.o.s (Mancozeb)
<b>Hazard Class</b>	9
<b>Packing Group</b>	PG III

### IATA

<b>UN-No</b>	UN3082
<b>Proper Shipping Name</b>	Environmentally hazardous substances, liquid, n.o.s. (Mancozeb)
<b>Hazard Class</b>	9
<b>Packing Group</b>	PG III
<b>ERG Code</b>	9L

### IMDG/IMO

<b>Proper Shipping Name</b>	Environmentally hazardous substances, liquid, n.o.s. (Mancozeb)
<b>Hazard Class</b>	9
<b>UN-No</b>	UN3082
<b>Packing Group</b>	PG III
<b>Marine pollutant</b>	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

## 15. REGULATORY INFORMATION

12-394XX  
 Manzate Max T & O Fungicide

**International Inventories**

Chemical Name	TSCA	DSL	NDSL	EINECS/ ELINCS	ENCS	CHINA	KECL	AICS
Zinc manganese ethylenebis dithiocarbamate					(2)-2127 (2)-1841	X	KE-13636	X
Ethylene thiourea	Present	X		X	(5)-423	X	KE-20941	X
Napthalenesulfonic acid, sodium salt, polymer with...	XU	X			(4)-557 (7)-1133	X	KE-25576	X

**USA**

**Federal Regulations**

**SARA 313**

Y

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values
Ethylene thiourea	96-45-7	0-0.5	0.1

**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 Depleters	Class 2 Ozone Depleters
Zinc manganese ethylenebis dithiocarbamate	8018-01-7	37				
Ethylene thiourea	96-45-7	0-0.5				

**CERCLA**

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

**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**

12-394XX

**Manzate Max T & O Fungicide**

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Zinc manganese ethylenebis dithiocarbamate 8018-01-7 ( 37 )			X	
Ethylene thiourea 96-45-7 ( 0-0.5 )			X	
Napthalenesulfonic acid, sodium salt, polymer with... 9008-63-3 ( 1.47 )		List 3 - Unknown Toxicity	X	

**State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	Category	California Prop. 65	Non-additive, corrosive chemical type
Zinc manganese ethylenebis dithiocarbamate	8018-01-7	Carcinogen	Carcinogen	
Ethylene thiourea	96-45-7	Carcinogen	Carcinogen Developmental	

**State Right-to-Know**

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

**International Regulations****Mexico - Grade**

Not available

Component	Category	Carcinogen Status	Exposure Limits
Zinc manganese ethylenebis dithiocarbamate 8018-01-7 ( 37 )	Carcinogen		
Ethylene thiourea 96-45-7 ( 0-0.5 )	Carcinogen		

**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
Ethylene thiourea	X

**16. OTHER INFORMATION**

Revision Date 19-Jun-2012

**Revision Summary**

Add to system

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**End of MSDS**