



Preparation Date 01-May-2015

Revision date 02-Jan-2019

Revision Number: 4

# Safety Data Sheet

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

### Product identifier

**Product Description:** Manzate Pro-Stick T&O Fungicide

### Other means of identification

**Product code** 12-371F  
**UN/ID no.** UN3077  
**Registration number(s)** 70506-234

### 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 - Dermal	Category 4
Skin sensitization	Category 1
Reproductive Toxicity	Category 2

### Label elements

#### EMERGENCY OVERVIEW

#### WARNING

#### Hazard Statements

Harmful in contact with skin  
May cause an allergic skin reaction  
Suspected of damaging fertility or the unborn child



<b>Appearance</b> Yellow	<b>Physical state</b> solid	<b>Odor</b> Slight Rotten egg-like
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**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood  
 Wear cold insulating gloves/face shield/eye protection  
 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: Wash with plenty of soap and water  
 Call a POISON CENTER or doctor if you feel unwell  
 Wash contaminated clothing before reuse  
 If skin irritation or rash occurs: Get medical advice/attention

**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**

- Very toxic to aquatic life
- May be harmful in contact with skin

### 3. Composition/information on Ingredients

Chemical name	CAS No	Weight-%
Sucrose	57-50-1	7.3
Mancozeb	8018-01-7	75
Ethylene thiourea	96-45-7	0-0.1

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**

<b>Eye contact</b>	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.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice. Remove contaminated clothing and shoes.
<b>Inhalation</b>	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 physician or poison control center immediately.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Call a physician or poison control center immediately.

**Most Important Symptoms and Effects, Both Acute and Delayed**

**Most Important Symptoms and Effects** MAY CAUSE ALLERGIC SKIN REACTION.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

**Notes to physician** Treat symptomatically.

**5. Fire-fighting measures**

**Suitable extinguishing media**

Use: Dry chemical. Carbon dioxide (CO2). Water spray. alcohol-resistant foam.

**Unsuitable extinguishing media** no data available.

**Specific hazards arising from the chemical**

No information available.

**Hazardous combustion products** Carbon disulfide, ethylene thiourea (ETU). Sulfur oxides. Oxides of nitrogen. Oxides of carbon.

**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. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.

**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.

**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 contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Keep out of reach of children. Wear protective gloves/protective clothing and eye/face protection.

**Conditions for safe storage, including any incompatibilities**

**Storage**

Keep containers tightly closed in a cool, well-ventilated place.

**incompatible materials**

Strong oxidizing agents. Acids.

**8. Exposure Controls/Personal Protection**

**Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL
Sucrose	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction

**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**

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**

Wear protective gloves/clothing. Long sleeved clothing. 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**

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**

<b>Physical state</b>	solid	<b>Odor</b>	Slight Rotten egg-like
<b>Appearance</b>	Yellow		
<b>color</b>	No information available		

#### **Property**

#### **VALUES**

#### **Remarks/ • Method**

<b>pH</b>	No information available	
<b>Melting point/freezing point</b>	no data available	
<b>Boiling Point/Range</b>	No information available	
<b>Flash Point</b>	No information available	
<b>Evaporation Rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability limit in air</b>		
<b>Upper Flammability Limit</b>	No information available	
<b>Lower Flammability Limit</b>	No information available	
<b>vapor pressure</b>	No information available	
<b>Vapor Density</b>	No information available	
<b>Specific gravity</b>	No information available	
<b>Water solubility</b>	No information available	
<b>Solubility in Other Solvents</b>	No information available	
<b>Partition coefficient: n-octanol/water</b>	No information available	
<b>Autoignition temperature</b>	205 C / 401 F °C / 401 °F	
<b>Decomposition temperature</b>	No information available	
<b>Viscosity, kinematic</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	

#### **OTHER INFORMATION**

<b>Softening point</b>	No information available
<b>molecular weight</b>	No information available
<b>VOC Content</b>	No information available
<b>Liquid Density</b>	No information available
<b>Bulk density</b>	40-45 lb/cu ft

## **10. Stability and Reactivity**

**Reactivity**

no data available

**Chemical stability**

Stable under normal conditions. Hazardous polymerisation does not occur.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

To avoid thermal decomposition, do not overheat. Keep away from children.

**incompatible materials**

Strong oxidizing agents. Acids.

**Hazardous decomposition products**

Hydrogen sulfide. Ethylenethiourea. Carbon disulfide.

<b>11. Toxicological Information</b>
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**Information on Likely Routes of Exposure****Product information**

Manzate Pro Stick :  
 Oral LD50 (rat) = >5,000 mg/kg  
 Dermal LD50 (rabbit) = > 2,000 mg/kg  
 Inhalation LC50 (rat) 4 hr = >5.4 mg/L

Mild to moderate eye irritant. Mild to slight skin irritant. Sensitizer .

**Inhalation**

May be harmful if inhaled.

**Eye contact**

May cause irritation.

**Skin contact**

Slightly irritating.

**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**

No information available.

**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**

Not Available.

**STOT - Single Exposure**

no data available.

**STOT - Repeated Exposure**

no data available.

**Chronic toxicity**

Avoid repeated exposure.

**Target organ effects**

Respiratory System, EYES.

**Aspiration hazard**

No information available.

**Numerical Measures of Toxicity - Product information**

LD50 Oral > 5000 mg/kg (rat)  
 LD50 Dermal > 2000 mg/kg (rat)  
 LC50 Inhalation LC50/inhalation/4h/rat = > 5.4 mg/l 0 ml/m<sup>3</sup> (Vapor)

**12. Ecological Information**

Marine Pollutant.

**ecotoxicity**

Manzate:  
 96 hr LC50  
 Rainbow trout = 0.73 mg/L  
 Fathead minnow = 0.57 mg/L  
 Bluegill sunfish = 0.84 mg/L  
 72 hr EC50  
 Freshwater algae = 0.43 mg/L

**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.

**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

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

**IATA**  
**UN/ID no.** UN3077

<b>Proper shipping name</b>	Environmentally hazardous substances, solid, n.o.s Mancozeb
<b>Hazard class</b>	9
<b>Packing group</b>	PG III
<b>Description</b>	IMDG - Marine Pollutant

**IMDG**

<b>UN/ID no.</b>	UN3077
<b>Proper shipping name</b>	Environmentally hazardous substances, solid, n.o.s (Mancozeb)
<b>Hazard class</b>	9
<b>Packing group</b>	PG III
<b>Environmental hazards</b>	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. Harmful if inhaled or absorbed through skin. Harmful if swallowed. May irritate eyes, nose, throat and skin.**

**International Inventories**

<b>USINV</b>	Not present
<b>DSL/NDSL</b>	Not present
<b>EINECS/ ELINCS</b>	Not Present
<b>ENCS</b>	Not Present
<b>China</b>	Not Present
<b>KECL</b>	Not Present
<b>PICCS</b>	Not Present
<b>AICS</b>	Not Present
<b>TSCA</b>	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
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Ethylene thiourea 96-45-7	10 lb	RQ 10 lb final RQ RQ 4.54 kg final RQ
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**CERCLA**

Component	RQ
Ethylene thiourea 96-45-7 ( 0-0.1 )	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 ( 0-0.1 )			U116

**Pesticide Information**

**State Regulations**

Component	CAS No	CATEGORY
Mancozeb 8018-01-7 ( 75 )	8018-01-7	Carcinogen
Ethylene thiourea 96-45-7 ( 0-0.1 )	96-45-7	Carcinogen
Component	California Prop. 65	Non-additive, corrosive chemical type
Mancozeb 8018-01-7 ( 75 )	Carcinogen	
Ethylene thiourea 96-45-7 ( 0-0.1 )	Carcinogen Developmental	

**State Right-to-Know**

Not applicable

**International regulations**

**U.S. EPA Label information**

EPA Pesticide registration number 70506-234

**16. Other Information**

**NFPA**                      **HEALTH** 1                      **flammability** 1                      **Instability** 1                      **Physical hazard** -

Preparation Date 01-May-2015

Revision date 02-Jan-2019

**Revision Summary**

Update logo Update section 1 Update Section 16\*\*\*

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**End of SDS**