



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



Appearance Yellow	Physical state solid	Odor 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

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	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.
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 physician or poison control center immediately.
Ingestion	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 ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ 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

Physical state	solid	Odor	Slight Rotten egg-like
Appearance	Yellow		
color	No information available		

Property

VALUES

Remarks/ • Method

pH	No information available	
Melting point/freezing point	no data available	
Boiling Point/Range	No information available	
Flash Point	No information available	
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	205 C / 401 F °C / 401 °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	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.

11. Toxicological Information

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 catergorized 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 ³ (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

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. Harmful if inhaled or absorbed through skin. Harmful if swallowed. May irritate eyes, nose, throat and skin.

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
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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