



Safety Data Sheet

United Phosphorus, Inc.

Preparation Date 20-May-2015

Revision date 08-Jul-2015

Revision Number: 1

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

Product identifier

Product Description: Manzate Pro-Stick

Other means of identification

Item#: 12-371CAN
UN-No UN3077
Synonyms Not Available
Registration number(s) PMRA # 28217

Recommended use of the chemical and restrictions on use

Recommended use Fungicide.
Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier Address

United Phosphorus 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
Acute toxicity - Inhalation (Vapors)	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
HARMFUL IF INHALED



appearance Yellow

Physical state solid

Odor Slight Rotten egg-like

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood
 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
 Use only outdoors or in a well-ventilated area
 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
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

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 %	Trade secret
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

Remove contaminated clothing and shoes. Rinse skin immediately with plenty of water for 15-20 minutes. Call 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 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 No information available.

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 information 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

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 Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental Precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for Clean-Up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

7. Handling and Storage

Precautions for safe handling

Handling Wear personal protective equipment. Do not breathe vapours or spray mist. Use only in area provided with appropriate exhaust ventilation. Use product only in closed system.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Protect

from light. Keep in properly labelled containers.

incompatible materials Strong oxidizing agents. Acids.

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 When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [(40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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. Goggles.

Skin protection

Wear protective gloves/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 and face before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing.

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 information available	
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	205 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
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
 Oxides of carbon and nitrogen. Hydrogen sulfide.

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 cause irritation of respiratory tract.

Eye contact Moderately irritating to the eyes.

Skin contact May be harmful if absorbed through the 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 No information available.
Mutagenic effects No information 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 information available.
STOT - repeated exposure No information 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 > 5,000 mg/kg (rat)
LD50 Dermal > 2,000 mg/kg (rat)
LC50 Inhalation: LC50/inhalation/4h/rat = > 5.4 mg/l (rat) (4-hr)

12. Ecological Information

Marine Pollutant.

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 information available.

Bioaccumulation/ Accumulation

No information available.

Other Adverse Effects

No information 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.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Ethylene thiourea	U116	Included in waste streams: K123, K124, K125, K126		U116

14. Transport Information

DOT

When shipped domestically by highway in non-bulk containers this product can be shipped as not regulated.

UN-No

UN3077

Proper shipping name

Environmentally hazardous substances, solid, n.o.s Mancozeb

Hazard class

9

Packing group

PG III

Marine Pollutant

Marine Pollutant.

<u>TDG</u>	When shipped in Canada domestic highway non-bulk this product can be shipped as Not regulated as per TDG 1.45.1
UN-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 Ingredient(s) with %]	This product contains a chemical which is listed as a marine pollutant according to TDG.

<u>ICAO</u>	
UN-No	UN3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s Mancozeb
Hazard class	9
Packing group	PG III
Description	Marine Pollutant

<u>IATA</u>	
UN-No	UN3077
Proper shipping name	Environmentally hazardous substances, solid, n.o.s Mancozeb
Hazard class	9
Packing group	PG III
Description	Marine Pollutant

<u>IMDG/IMO</u>	
UN-No	UN3077
Proper shipping name	Environmentally hazardous substances, solid, n.o.s (Mancozeb)
Hazard class	9
Packing group	PG III
Marine Pollutant	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

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 absorbed through the skin. Causes moderate eye irritation. Toxic to aquatic organisms.

International Inventories

USINV	Not determined
DSL/NDSL	Not determined
EINECS/ ELINCS	Does not comply
ENCS	Does not comply
China	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply
TSCA	Does not comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - 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 40n of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values
Ethylene thiourea - 96-45-7	0.1

SARA 311/312 Hazardous

Categorization

Acute health hazard	yes
Chronic health hazard	yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	yes

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

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	California Prop. 65	Non-additive, corrosive chemical type
Mancozeb 8018-01-7 (75)	8018-01-7	Carcinogen	Carcinogen	
Ethylene thiourea 96-45-7 (0-0.1)	96-45-7	Carcinogen	Carcinogen Developmental	

State Right-to-Know

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Mancozeb				X	
Ethylene thiourea	X	X	X	X	

International regulations

U.S. EPA Label information

EPA Pesticide registration number 70506-234

16. Other Information

NFPA **HEALTH 2** **flammability 1** **Instability 0** **Physical hazard -**

Preparation Date 20-May-2015

Revision date 08-Jul-2015

Revision Summary

Update to GHS format

Disclaimer

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End of MSDS