



Safety Data Sheet

Preparation Date 20-May-2015

Revision date 22-Jul-2025

Revision Number: 6

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

Identification of the product

Product Description Manzate Pro-Stick

Other means of identification

Internal SDS code 12-371CAN

UN/ID no UN3077

Registration number(s) PCPA Canada Registration No - 28217

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 Agrosolutions Canada Inc .

PO Box 12219

Research Triangle Park, NC,

27709

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 and Drug Safety (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)

Skin sensitization	Category 1B
Carcinogenicity	Category 2
Reproductive Toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard Statements

May cause an allergic skin reaction

Suspected of damaging fertility or the unborn child

Suspected of causing cancer

May cause damage to organs through prolonged or repeated exposure

**Appearance** Granule**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 breathe dust/fume/gas/mist/vapors/spray
 Do not eat, drink or smoke when using this product
 Wash face, hands and any exposed skin thoroughly after handling
 Contaminated work clothing should not be allowed out of the workplace

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 in accordance with local/national regulations

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

- Toxic to aquatic life

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
Methenamine	100-97-0	1

*The exact percentage (concentration) 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 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

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**

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 TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction
Mancozeb		(vacated) Ceiling: 5 mg/m ³
Methenamine	TWA: 1 mg/m ³ inhalable fraction and vapor	

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**9.1 Information on basic physical and chemical properties**

Appearance	Granule
Physical state	solid
Odor	Slight Rotten egg-like
color	Yellow

Property	VALUES	Remarks/ Method
pH		None known
Melting point/freezing point		None known
Boiling Point/Range		None known
Flash Point		None known
Evaporation Rate		None known
Flammability (solid, gas)		None known
Specific gravity		None known
Bulk density	40-45 lb/cu ft	None known
Water solubility		None known
Solubility in Other Solvents	No information available	None known
Partition coefficient: n-octanol/water		None known
Autoignition temperature	205 C	None known
Decomposition temperature		None known

Viscosity

None known

9.2 OTHER INFORMATION- NONE**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

Based on available data, the classification criteria are not met.

Eye contact

Moderately irritating to the eyes.

Skin contact

Based on available data, the classification criteria are not met. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion

Based on available data, the classification criteria are not met.

Information on Toxicological Effects**Symptoms**

No information available.

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

Repeated or prolonged contact may cause allergic reactions in very susceptible persons.

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	Suspected of damaging fertility or the unborn child.
STOT - Single Exposure	no data available.
STOT - Repeated Exposure	May cause damage to organs through prolonged or repeated exposure.
Chronic toxicity	Avoid repeated exposure.
Target organ effects	Respiratory System, Thyroid.
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

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 can be 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.
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Contaminated packaging	Refer to product label.
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14. Transport Information

DOT

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

UN/ID no	When shipped in bulk the following description must be used: UN3077
Proper shipping name	Environmentally hazardous substances, solid, n.o.s (Mancozeb)
Hazard class	9
Packing group	PG III
IMDG - 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 When shipped in bulk use the following description
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 Ingredient(s) with %]	This product contains a chemical which is listed as a marine pollutant according to TDG.

<u>IATA</u>	Single or inner packagings less than 5L (liquid) or 5kg net (solids) are excepted from the Dangerous Goods regulations (IATA Special provision A197)
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

<u>IMDG</u>	Single or inner packaging less than 5L (liquid) or 5 kg net (solids) are excepted from the Dangerous Goods regulations (IMDG 2.10.2.7)
UN/ID no	UN3077
Proper shipping name	Environmentally hazardous substances, solid, n.o.s (Mancozeb)
Hazard class	9
Packing group	PG III
Environmental hazards	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

15. Regulatory Information

This chemical/product is a pesticide product registered by the PMRA and is subject to specific label requirements under these regulations. The requirements may differ classification and hazard information required for safety data sheets and for labels of non-pesticide products. The following is information as required on the registered product label.

signal word WARNING

Keep out of Reach of Children. Causes moderate eye irritation. May be harmful if inhaled or swallowed. Toxic to fish.

International Inventories

USINV	Not present
DSL/NDL	Not present
EINECS/	Not Present
ELINCS	
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/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 does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

CERCLA

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 (0-0.1)	10 lb

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

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Mancozeb 8018-01-7 (75)			X	
Ethylene thiourea 96-45-7 (0-0.1)			X	
Methenamine 100-97-0 (1)			X	

State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

California Proposition 65		This product contains the following Proposition 65 chemicals:	
Component		California Prop. 65	
Mancozeb 8018-01-7 (75)		Carcinogen	
Ethylene thiourea 96-45-7 (0-0.1)		Carcinogen Developmental	
Chemical name	CAS No	CATEGORY	
Mancozeb	8018-01-7	Carcinogen	
Ethylene thiourea	96-45-7	Carcinogen	

Prop 65 Pictogram



Prop 65 Warning Statement California Proposition 65

WARNING

This product can expose you to chemicals 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

State Right-to-Know

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sucrose - 57-50-1	X		X		
Ethylene thiourea - 96-45-7	X	X	X	X	
Methenamine - 100-97-0		X			

International regulations**U.S. EPA Label information**

EPA Pesticide registration number 28217

16. Other Information

NFPA HEALTH 2 flammability 1 Instability 0 Physical hazard -

Preparation Date 20-May-2015

Revision date 22-Jul-2025

Revision Summary

Update section 2 Update section 4 Update section 6 Update section 10 Update section 11 Update section 15

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End of SDS