



# Safety Data Sheet

Preparation Date 07-Feb-2019

Revision date 22-Jul-2025

Revision Number: 5

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

### Identification of the product

**Product Description** Manzate Max

### Other means of identification

**Internal SDS code** 12-394XCA

**Registration number(s)** PCPA 33299

### 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)

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
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

Harmful if inhaled  
May cause an allergic skin reaction  
May damage fertility or the unborn child  
Suspected of causing cancer  
May cause damage to organs through prolonged or repeated exposure

**Appearance** Yellow Green**Physical state** Liquid**Odor** pungent**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

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

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

**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-%
1,2-Benzisothiazolin-3-one (Proxel GXL)	2634-33-5	0.16
Zinc manganese ethylenebis dithiocarbamate	8018-01-7	37
Ethylene thiourea	96-45-7	0-0.5

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 and wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.

**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** Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**Protection of First-aiders** Use personal protective equipment.

**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**

Carbon dioxide (CO<sub>2</sub>).

Use: Dry chemical. Water spray. alcohol-resistant foam.

**Unsuitable extinguishing media** no data available.

**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating gases and vapours.

**Hazardous combustion products** Carbon disulfide, ethylene thiourea (ETU). Carbon oxides.

**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** Soak up with inert absorbent material. 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

**Precautions for safe handling**

**Handling** Do not eat, drink or smoke when using this product. Avoid contact with skin and eyes. Wear personal protective equipment. Do not breathe vapours or spray mist. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use.

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

<b>Storage</b>	Keep containers tightly closed in a cool, well-ventilated place.
<b>incompatible materials</b>	Strong oxidizing agents.

**8. Exposure Controls/Personal Protection****Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL
Zinc manganese ethylenebis dithiocarbamate		(vacated) Ceiling: 5 mg/m <sup>3</sup>

**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. Face-shield.

**Skin protection****Respiratory protection**

Long sleeved clothing. Chemical resistant gloves. Chemical resistant footwear plus socks. 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****9.1 Information on basic physical and chemical properties**

<b>Appearance</b>	Yellow Green
<b>Physical state</b>	Liquid
<b>Odor</b>	pungent
<b>color</b>	No information available

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
<b>pH</b>	8	None known
<b>Melting point/freezing point</b>	9 °C	None known
<b>Boiling Point/Range</b>		None known
<b>Flash Point</b>	No information available	None known
<b>Evaporation Rate</b>		None known
<b>Flammability (solid, gas)</b>		None known
<b>Specific gravity</b>	1.27-1.33	None known
<b>Bulk density</b>	1270 kg/m <sup>3</sup>	None known
<b>Water solubility</b>		None known
<b>Solubility in Other Solvents</b>	Dispersible in water	None known
<b>Partition coefficient: n-octanol/water</b>		None known
<b>Autoignition temperature</b>		None known
<b>Decomposition temperature</b>		None known
<b>Viscosity</b>		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.

**Hazardous polymerization**

Hazardous polymerisation does not occur.

**Conditions to avoid**

No information available.

**incompatible materials**

Strong oxidizing agents.

**Hazardous decomposition products**

Carbon oxides. Ethylenethiourea.

**11. Toxicological Information****Information on Likely Routes of Exposure****Product information**

Manzate Max= oral LD50 = &gt;5,000 mg/kgdermal LD50 = &gt;5,000 mg/kginhalation LC50 = &gt;2.02 mg/L No deathsirritation = Slight irritation = Slight sensitizer = Not a sensitizer

**Inhalation**

Harmful if inhaled.

**Eye contact**

May cause slight irritation.

**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

**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**                      Thyroid, Respiratory System.  
**Aspiration hazard**                      No information available.

**Numerical Measures of Toxicity - Product information**

**LD50 Oral**                                      > 5000 mg/kg (rat)  
**LD50 Dermal**                                  > 5000 mg/kg (rat)  
**LC50 Inhalation**                              > 2.02 mg/l No mortality

**12. Ecological Information****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**

Bioaccumulative potential.

Chemical name	Log Pow
1,2-Benzisothiazolin-3-one (Proxel GXL) 2634-33-5	1.3

**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.

**Contaminated packaging**

Refer to product label.

**14. Transport Information****DOT**

Not regulated when shipped domestically by highway in non-bulk containers as per 49 CFR 171.4

When shipped in bulk, by vessel, or internationally refer to the IMDG shipping description:

**TDG**

When shipped in Canada domestic highway non-bulk this product can be shipped as Not regulated as per TDG 1.45.1  
In bulk, by vessel or internationally - use IMDG description

<b>IATA</b>	Single or inner packagings less than 5L (liquid) or 5kg net (solids) are excepted from the Dangerous Goods regulations (IATA Special provision A197)
<b>UN/ID 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>Description</b>	Marine pollutant
<b>IMDG</b>	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)
<b>UN/ID 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>Environmental hazards</b>	IMDG - Marine Pollutant

## 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. Potential skin sensitizer. Toxic to fish.**

### International Inventories

<b>USINV</b>	Present
<b>DSL/NDSL</b>	Not present
<b>EINECS/</b>	Not Present
<b>ELINCS</b>	
<b>ENCS</b>	Not Present
<b>China</b>	Present
<b>KECL</b>	Present
<b>PICCS</b>	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 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 ( 0-0.5 )	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**

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
1,2-Benzisothiazolin-3-one (Proxel GXL) 2634-33-5 ( 0.16 )			X	
Zinc manganese ethylenebis dithiocarbamate 8018-01-7 ( 37 )			X	
Ethylene thiourea 96-45-7 ( 0-0.5 )			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:	
<b>Component</b>		<b>California Prop. 65</b>	
Zinc manganese ethylenebis dithiocarbamate 8018-01-7 ( 37 )		Carcinogen	
Ethylene thiourea 96-45-7 ( 0-0.5 )		Carcinogen Developmental	
<b>Chemical name</b>	<b>CAS No</b>	<b>CATEGORY</b>	
Zinc manganese ethylenebis dithiocarbamate	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](http://www.P65Warnings.ca.gov)

**State Right-to-Know**

Chemical name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethylene thiourea - 96-45-7	X	X	X	X	

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

EPA Pesticide registration number PCPA 33299

**16. Other Information****NFPA**

HEALTH 1

flammability 0

Instability 0

Physical hazard -

Preparation Date

07-Feb-2019

Revision date

22-Jul-2025

Revision Summary



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

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**End of SDS**