



Preparation Date 01-May-2015

Revision date 31-Dec-2018

Revision Number: 4

# Safety Data Sheet

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

### Product identifier

**Product Description:** Manzate Max Fungicide

### Other means of identification

**Product code** 12-394X

**Registration number(s)** 70506-194

### 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 - Inhalation (Vapors) | Category 3  |
| Skin sensitization                   | Category 1  |
| Reproductive Toxicity                | Category 1B |

### Label elements

#### EMERGENCY OVERVIEW

#### DANGER

#### Hazard Statements

Toxic if inhaled

May cause an allergic skin reaction

May damage fertility or the unborn child



**Appearance** Yellow Green

**Physical state** Liquid

**Odor** pungent

**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

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

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

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-% |
|--|-----------|----------|
| 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** no data available.

**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).

**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**

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

**incompatible materials** Strong oxidizing agents.

**8. Exposure Controls/Personal Protection**

|                                       |   |
|---------------------------------------|---|
| <b>Exposure guidelines</b>            | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.   |
| <b>Engineering controls</b>           | 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.  |
| <b>Personal protective equipment</b>  |   |
| <b>Eye/Face Protection</b>            | 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.   |
| <b>Skin protection</b>                | Long sleeved clothing. Chemical resistant gloves. Chemical resistant footwear plus socks.   |
| <b>Respiratory protection</b>         | 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. |
| <b>General hygiene considerations</b> | 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>                         | Liquid                   | <b>Odor</b>              | pungent |
| <b>Appearance</b>                             | Yellow Green             |                          |         |
| <b>color</b>                                  | No information available |                          |         |
| <b>Property</b>                               | <b>VALUES</b>            | <b>Remarks/ • Method</b> |         |
| <b>pH</b>                                     | 8                        |                          |         |
| <b>Melting point/freezing point</b>           | 9 °C / 48 °F             |                          |         |
| <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>                       | 1.27-1.33                |                          |         |
| <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>               | no data available        |                          |         |
| <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>   | 1270 kg/m <sup>3</sup>   |

## 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.

## 11. Toxicological Information

### Information on Likely Routes of Exposure

#### **Product information**

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

#### **Inhalation**

Harmful by inhalation.

#### **Eye contact**

May cause slight irritation.

#### **Skin contact**

May be harmful if absorbed through the skin.

#### **Ingestion**

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<br>96-45-7 | -     | Group 3 | Reasonably Anticipated | X    |

#### **Reproductive effects**

Not Available.

#### **STOT - Single Exposure**

no data available.

#### **STOT - Repeated Exposure**

no data available.

#### **Chronic toxicity**

Avoid repeated exposure.

#### **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

**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)<br>2634-33-5 | 1.3     |

**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-bulk containers as per 49 CFR 171.4

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

**IATA**

UN/ID no.

UN3082

Proper shipping name

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

Hazard class

9

Packing group

PG III

**Description** Marine pollutant

**IMDG**

**UN/ID no.** UN3082  
**Proper shipping name** Environmentally hazardous substances, liquid, 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 swallowed. Harmful if inhaled or absorbed through skin. Toxic to fish and aquatic organisms.**

**International Inventories**

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

**CERCLA**

| Component                              | RQ    |
|--|-------|
| Ethylene thiourea<br>96-45-7 ( 0-0.5 ) | 10 lb |

SARA Product RQ 0

**RCRA**

| Component                              | RCRA - D Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|--|------------------------|------------------------|------------------------|
| Ethylene thiourea<br>96-45-7 ( 0-0.5 ) |                        |                        | U116                   |

**Pesticide Information****State Regulations**

| Component  | CAS No    | CATEGORY   |
|--|-----------|------------|
| Zinc manganese ethylenebis dithiocarbamate<br>8018-01-7 ( 37 ) | 8018-01-7 | Carcinogen |
| Ethylene thiourea<br>96-45-7 ( 0-0.5 )                         | 96-45-7   | Carcinogen |

**Prop 65 Pictogram****Prop 65 Warning Statement  
California Proposition 65****WARNING!**

This product can expose you to chemicals including those listed below, 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)

| Component  | California Prop. 65         | Non-additive, corrosive chemical type |
|--|-----------------------------|---------------------------------------|
| Zinc manganese ethylenebis dithiocarbamate<br>8018-01-7 ( 37 ) | Carcinogen                  |                                       |
| Ethylene thiourea<br>96-45-7 ( 0-0.5 )                         | Carcinogen<br>Developmental |                                       |

**State Right-to-Know**

Not applicable

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

EPA Pesticide registration number 70506-194

**16. Other Information**

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

Preparation Date 01-May-2015

Revision date 31-Dec-2018

**Revision Summary**

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

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**End of SDS**