



SAFETY DATA SHEET

ROPER PRO FUNGICIDE

Section 1. Identification

Product identifier : ROPER PRO FUNGICIDE
SDS # : 951; N-066
Other means of identification : EPA Registration Number: 34704-RROO (1199)
Product type : Granular solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Fungicide.
Uses advised against
Not available.

Supplier's details : LOVELAND PRODUCTS, INC.
 P.O. Box 1286
 Greeley, CO 80632-1286
Telephone no. : 1-888-574-2878 (Customer Service)
Email : retail-SDS2@nutrien.com
Emergency telephone number (with hours of operation) : CHEMTREC (24 hrs): 1-800-424-9300 or +1-703-527-3887

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture : SKIN SENSITIZATION - Category 1B
 CARCINOGENICITY - Category 2
 TOXIC TO REPRODUCTION - Category 1B
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: May cause an allergic skin reaction.
 Suspected of causing cancer.
 May damage fertility or the unborn child.
 May cause damage to organs through prolonged or repeated exposure. (nervous system, thyroid)

Precautionary statements

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Do not breathe dust or mist. Contaminated work clothing must not be allowed out of the workplace.

Section 2. Hazards identification

Response	: IF exposed or concerned: Get medical advice or attention. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.
Storage	: Store locked up.
Disposal	: Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: None known.
Hazards identified when used	: Contact with water can create vapors that may be flammable.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% (w/w)	Identifiers
mancozeb	75	CAS: 8018-01-7
methenamine	1	CAS: 100-97-0
ethylene thiourea	<0.1	CAS: 96-45-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Check for and remove any contact lenses. Get medical attention.
Inhalation	: Remove person to fresh air and keep comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: May cause mild eye irritation.
Inhalation	: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	: May cause an allergic skin reaction. May cause slight transient irritation.
Ingestion	: No known significant effects or critical hazards.

Section 4. First aid measures

Over-exposure signs/symptoms

- | | |
|---------------------|---|
| Eye contact | : Adverse symptoms may include the following:
redness
watering |
| Inhalation | : Adverse symptoms may include the following:
coughing
irritation |
| Skin contact | : Adverse symptoms may include the following:
irritation
redness |
| Ingestion | : No specific data. |

Indication of immediate medical attention and special treatment needed, if necessary

- | | |
|-----------------------------------|--|
| Notes to physician | : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| Specific treatments | : No specific treatment. |
| Protection of first-aiders | : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Decontamination measures may be necessary. Personnel and equipment must be checked and decontaminated prior to leaving the area. |

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- | | |
|---------------------------------------|---|
| Suitable extinguishing media | : Use dry chemical or CO ₂ . |
| Unsuitable extinguishing media | : Do not use water jet. |

- | | |
|---|---|
| Specific hazards arising from the chemical | : Contact with water can create vapors that may be flammable. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
|---|---|

- | | |
|---|---|
| Hazardous thermal decomposition products | : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
carbon disulfide
ethylene thiourea |
|---|---|

- | | |
|---|--|
| Special protective actions for fire-fighters | : No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Contain and collect the water used to fight the fire for later treatment and disposal. |
|---|--|

- | | |
|---|---|
| Special protective equipment for fire-fighters | : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. |
|---|---|

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Recover the material and use it for the intended purpose.
or
Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Approach release from upwind. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Use appropriate equipment to put the spilled substance in a container for reuse or disposal. Recycle to process, if possible.
or
Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Read label before use. Apply this product only as specified on the label. Do not handle until all safety precautions have been read and understood. Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid creating dusty conditions and prevent wind dispersal. Do not breathe dust. Wear suitable respiratory protection. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Must be stored in a dry location. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Store locked up.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
mancozeb	NIOSH REL (United States, 10/2020) [manganese compounds and fume] TWA 10 hours: 1 mg/m ³ (as Mn). Form: Fume. STEL 15 minutes: 3 mg/m ³ (as Mn). Form: Fume. OARS WEEL (United States, 9/2024) Skin sensitizer. TWA 8 hours: 1 mg/m ³ . Form: Total.
methenamine	OSHA PEL (United States, 5/2018) [Manganese compounds] CEIL: 5 mg/m ³ (as Mn). ACGIH TLV (United States, 1/2024) A4. Skin sensitizer. TWA 8 hours: 1 mg/m ³ . Form: Inhalable fraction and vapor.

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Contact your personal protective equipment supplier to verify the compatibility of the equipment for the intended purpose.

- General information** : Refer to product label or packaging for specific PPE requirements.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when the product label or a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the product label or risk assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

Section 8. Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if the product label or risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body must be used as specified on the product label or if a risk assessment indicates this is necessary.
- Other skin protection** : Appropriate footwear and any additional skin protection measures must be used as specified on the product label or if a risk assessment indicates this is necessary. Recommended: Socks and shoes.
- Respiratory protection** : A respirator meeting the appropriate standard or certification must be selected based on the product label or the hazard and potential for exposure. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Solid. [Granular.]
- Color** : Yellow.
- Odor** : Rotten egg-like. [Slight]
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Not applicable.
- Vapor pressure** : Not available.
- Relative vapor density** : Not applicable.
- Relative density** : Not available.
- Density** : 0.64 to 0.72 g/cm³
- Bulk density** : 40 to 45 lb/ft³
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : 205°C (401°F)
- Decomposition temperature** : Not available.
- Viscosity** : Not applicable.
- Particle characteristics**
- Median particle size** : Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: Contact with water may lead to chemical changes that reduce product effectiveness and can create vapors which may be flammable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Extremes of temperature and direct sunlight. Keep away from incompatible materials. Protect from moisture.
Incompatible materials	: Strong oxidizing materials and acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name

ROPER PRO FUNGICIDE

mancozeb

Result

Rat - Oral - LD50 >5000 mg/kg**Rabbit - Dermal - LD50** >2000 mg/kg**Rat - Inhalation - LC50 Vapor** >5.4 mg/l [4 hours]**Rat - Oral - LD50** 5 g/kg**Rabbit - Dermal - LD50** >5 g/kg**Rat - Dermal - LD50** >10 g/kg

Conclusion/Summary [Product] : Not considered to be acutely toxic. Repeated or prolonged overexposure may result in chronic health effects.

Skin corrosion/irritation

Conclusion/Summary [Product] : May cause slight transient irritation.

Serious eye damage/eye irritation

Conclusion/Summary [Product] : May cause mild eye irritation.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Sensitizer to skin. May cause an allergic skin reaction.

Respiratory

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Section 11. Toxicological information

Germ cell mutagenicity

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary [Product] : Contains material which may cause cancer, based on animal data. (Mancozeb)
Mancozeb is broken down and/or metabolized to ethylene thiourea, which is considered a probable human carcinogen by the NTP and the EPA.

Classification

Product/ingredient name	OSHA	IARC	NTP
ethylene thiourea	-	3	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary [Product] : Contains material which may cause developmental abnormalities, based on animal data. (Mancozeb)

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
mancozeb	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (nervous system, thyroid) - Category 2

Aspiration hazard

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

Information on the likely routes of exposure

Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact	: May cause mild eye irritation.
Inhalation	: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	: May cause an allergic skin reaction. May cause slight transient irritation.
Ingestion	: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: redness watering
Inhalation	: Adverse symptoms may include the following: coughing irritation
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No specific data.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Long term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Potential chronic health effects

Conclusion/Summary [Product] : See below.

General : May cause damage to organs through prolonged or repeated exposure. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. May cause sensitization by skin contact. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : May damage the unborn child. (Animal evidence)

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
mancozeb	5000	N/A	N/A	N/A	N/A

Other information

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name

mancozeb

Result

Acute - LC50 - Fresh water Fish - Cyprinid fish - *Barilius bendelisis* 400 µg/l [96 hours]

Acute - EC50 - Fresh water Algae - Green algae - *Chlorella pyrenoidosa* 0.54 mg/l [96 hours]

Chronic - NOEC - Fresh water Algae - Green algae - *Chlorella pyrenoidosa* 0.02 mg/l [96 hours]

Chronic - NOEC - Fresh water US EPA Daphnia - Water flea - *Daphnia magna* 0.007 ppm [21 days]

Chronic - NOEC US EPA Fish - Fathead minnow - *Pimephales promelas* 0.0022 ppm [35 days]

Acute - LC50 - Fresh water OECD Daphnia - Water flea - *Daphnia magna* - Neonate 0.19 mg/l [48 hours]

Acute - EC50 - Fresh water Daphnia - Water flea - *Daphnia magna* 36 g/l [48 hours]

Acute - LC50 - Marine water Fish - Sheepshead minnow -

Section 12. Ecological information

Cyprinodon variegatus 49 g/l [96 hours]

Conclusion/Summary [Product]

: Very toxic to aquatic life with long lasting effects. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters. Apply this product only as specified on the label.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
mancozeb	1.33	-	Low
methenamine	-2.18	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: Follow disposal instructions on label. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Do not reuse containers for any purpose. Disposal should be in accordance with applicable regional, national and local laws and regulations. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at <http://www.acrecycle.org/>. Do not contaminate water, food or feed by storage or disposal.

RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
mancozeb	8018-01-7	Listed	U114

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN3082	UN3082	UN3082	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mancozeb), RQ (ethylene thiourea)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mancozeb)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mancozeb)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (mancozeb)
Transport hazard class(es)	9  	9  	9  	9  

Section 14. Transport information

Packing group	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.

Additional information

DOT Classification

: Except when all or part of the transportation is by vessel, the marine pollutant mark does not apply to non-bulk packages transported domestically by motor vehicle, rail car or aircraft.

Reportable quantity 20000 lbs / 9080 kg. Packages of less than the reportable quantity are not subject to Hazmat transportation requirements.

Remarks The letters "RQ" must also be entered on the shipping paper either before or after the basic description when the quantity in a package exceeds the reportable quantity.

TDG Classification

: Part 3 (Documentation) and Part 4 (Dangerous Goods Safety Marks) do not apply to substances that are classified as marine pollutants in accordance with section 2.43 of Part 2 (Classification) if they are in transport solely on land by road vehicle or railway vehicle.
Additional exceptions for shipment of less than a total of 450 kg or 450 L of this product by road vehicle or rail vehicle are provided under Special Provision 99 of the TDG Regulations.

IMDG

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : Not determined.
- Canada** : Not determined.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory:** Not determined.
- Japan** : **Japan inventory (CSCL):** Not determined.
Japan inventory (ISHL): Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.

Section 15. Regulatory information

- Republic of Korea** : All components are listed or exempted.
Taiwan : Not determined.
Thailand : Not determined.
Turkey : Not determined.
United States : Not determined.
Viet Nam : All components are listed or exempted.

U.S. Federal regulations

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Water Act (CWA) 307: mancozeb

Clean Air Act Section 112 : Listed

(b) Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SKIN SENSITIZATION - Category 1B
 CARCINOGENICITY - Category 2
 TOXIC TO REPRODUCTION - Category 1B
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	mancozeb	8018-01-7	75
Supplier notification	mancozeb	8018-01-7	75

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: sucrose
New York : None of the components are listed.
New Jersey : The following components are listed: mancozeb; methenamine
Pennsylvania : The following components are listed: mancozeb; sucrose

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including mancozeb, which is known to the State of California to cause cancer, and ethylene thiourea, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

US EPA

EPA REG. NO. : 34704-RROO (1199)

EPA Statement

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:

CAUTION

Section 15. Regulatory information

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, clothing or eyes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Section 16. Other information

History

Date of issue/Date of revision : 8/15/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations

ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
SKIN SENSITIZATION - Category 1B	Expert judgment
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 1B	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

Supply chain partners must ensure they pass this SDS, and all other relevant safety information to their customers.

DISCLAIMER AND LIMITATION OF LIABILITY

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS. This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.

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