

SDS per US OSHA Hazard Communication Standard (HazCom) 2012, 29 CFR §1910.1200

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Product name: MeloCon® WG
Product Type: Nematicide
EPA Registration No. 264-1175-70051
Active Ingredient: *Purpureocillium lilacinum* strain 251 (formerly *Paecilomyces lilacinus* strain 251)
CAS No.: None

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Identified uses: For use to control plant-parasitic nematodes in soil
Uses advised against: Any use not listed on the label

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name: Certis USA LLC
Address: 9145 Guilford Road, Suite 175
Columbia, Maryland 21046
USA
Phone Number: +1 (800) 847-5620
Website: <http://www.CertisUSA.com>

1.4. EMERGENCY TELEPHONE NUMBER

Emergency number: +1 (800) 255-3924

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

OSHA Hazard Classification: Not classified
Signal Word: None
Hazard Statements: None
Pictogram: None
Precautionary Statements: None

2.2. OTHER HAZARDS

Micro-organisms may have the potential to provoke sensitizing reactions.
No physical hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Active Ingredient(s)	CAS #	% w/w	
<i>Purpureocillium lilacinum</i> strain 251 (formerly <i>Paecilomyces lilacinus</i> strain 251)	N/A	6%	
Hazardous Ingredient(s)	Classification	CAS #	% w/w
N/A			

SECTION 4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

General advice: When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Inhalation: Move the victim to fresh air and keep at rest. If symptoms persist, call a physician. 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.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Eye contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion: Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No symptoms are known or expected.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. There is no specific antidote.

SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable Extinguishing Media: Water spray, foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media: High volume water jet

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Hazardous combustion products: Dangerous gases are evolved in the event of a fire.

5.3. ADVICE FOR FIREFIGHTERS;

Protection of Firefighters: Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

For non-emergency personnel: Avoid dust formation. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment. When dealing with a spillage do not eat, drink or smoke.

For emergency responders: Use appropriate personal protective equipment. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Contain the spread of the firefighting media.

6.2. ENVIRONMENTAL PRECAUTIONS

Do not allow runoff from firefighting to enter drains or water sources. Do not allow to enter soil, waterways or wastewater canal.

For terrestrial uses: do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark.

Do not contaminate water when disposing of equipment washwaters or rinsate.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Methods for Containment and Clean-Up: Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Other Information: Dispose of in accordance with all Federal, State and local procedures.

6.4. REFERENCE TO OTHER SECTIONS

Refer to Section 7 for safe handling; Section 8 for personal protective equipment; and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Advice on safe handling: No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Avoid dust formation. Ensure adequate ventilation.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again.

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage areas and containers: Store in a place accessible by authorized persons only. Store in original container. Protect against moisture. Keep containers tightly closed in a dry, cool and well-ventilated place.

Advice on common storage: Keep away from food, drink and animal feeding-stuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Substance	Occupational Exposure Limits
<i>Purpureocillium lilacinum</i>	<u>OSHA PELs</u> : not established <u>ACGIH TLVs</u> : not established No occupational limit assigned.

8.2. EXPOSURE CONTROLS

Wear protective equipment to comply with good occupational hygiene practice. Do not eat, drink or smoke at the workplace.

8.2.1. ENGINEERING CONTROLS:

None.

8.2.2. PERSONAL PROTECTIVE EQUIPMENT:

In normal use and handling conditions, please refer to the label and/or leaflet. In all other cases, the following recommendations would apply.

RESPIRATORY PROTECTION

- When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

EYE/FACE PROTECTION

- Safety glasses with side-shields

HAND PROTECTION

- Chemical resistant nitrile rubber gloves

SKIN/BODY PROTECTION

- Wear long-sleeved shirt and long pants, and shoes plus socks.

GENERAL PROTECTIVE MEASURES

- Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
- Keep and wash PPE separately from other laundry. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.

8.2.3. ENVIRONMENTAL EXPOSURE CONTROLS

For terrestrial uses: do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark.

Do not contaminate water when disposing of equipment washwaters or rinsate.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light pink granule
Odor:	Odorless
Odor Threshold:	Not determined
pH:	6 – 8 at 3%
Melting Point / Freezing Point:	~146°C / 294.8°F
Initial Boiling Point:	Not determined
Boiling Range:	Not determined
Flash Point:	Not applicable
Evaporation Rate:	Not determined
Flammability (solid, gas):	Not applicable
Lower & Upper Flammability Limits:	Not determined
Vapor Pressure:	Not determined
Vapor Density (Air = 1):	Not determined
Density (Bulk):	0.47 – 0.55 g/mL
Solubility:	Dispersible in water
Partition Coefficient (n-octanol/water):	Not applicable

Auto-ignition Temperature:	To 400°C / 752°F
Decomposition Temperature:	Not determined
Viscosity:	Not applicable
Other relevant properties:	See below

9.2. OTHER INFORMATION

Lower & Upper Explosion Limit	Not determined
Explosivity	Not determined

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No data available on thermal decomposition.

10.2. CHEMICAL STABILITY

Stable under normal conditions of storage and use.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

No hazardous reactions when stored and handled according to prescribed instructions.

10.4. CONDITIONS TO AVOID

Avoid extreme temperatures and direct sunlight.

10.5. INCOMPATIBLE MATERIALS

None known.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

No decomposition products expected under normal conditions of storage and use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. LIKELY ROUTES OF EXPOSURE

Oral, dermal, inhalation, skin.

11.2 SYMPTOMS RELATED TO PHYSICAL, CHEMICAL, AND/OR TOXICOLOGICAL CHARACTERISTICS

Prolonged or frequently-repeated skin contact to the undiluted product may cause allergic reactions in some individuals.

11.3 EFFECTS (DELAYED/IMMEDIATE/CHRONIC) FROM SHORT- AND LONG-TERM EXPOSURE

See section 4.

11.4 ACUTE TOXICITY

Test	Results	US EPA Toxicity Category
Acute oral LD₅₀	ATE* (rat) > 2,000 mg/kg	III
Acute dermal LD₅₀	ATE* (rat) > 2,000 mg/kg	III
Acute inhalation LC₅₀	ATE* (rat) > 5 mg/L (4-hr exposure time)	IV
Eye irritation:	No eye irritation (rabbit)	IV
Skin irritation:	No skin irritation (rabbit)	IV
Respiratory or skin sensitization:	Non-sensitizing (guinea pig) Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.	Not applicable

* ATE = Acute toxicity estimate

11.5 OTHER INFORMATION ON ADVERSE HEALTH EFFECTS

Specific Target Organ Toxicity (STOT)—Repeated Exposure	No specific target organ toxicity observed in experimental animal studies. Developmental and reproductive toxicity testing not required for microorganisms.
Mutagenicity	Not mutagenic or genotoxic in a battery of <i>in vitro</i> and <i>in vivo</i> tests.
Carcinogenicity	Testing not required for microorganisms. <u>NTP</u> : not listed <u>IARC</u> : not listed <u>OSHA</u> : not listed

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Species	Test	Study Duration	Conditions	Test substance	Results
Rainbow trout (<i>Oncorhynchus mykiss</i>)	Acute freshwater fish	96-hour		AI	LC ₅₀ > 100 mg/L
Daphnid (<i>Daphnia magna</i>)	Acute freshwater invertebrate	48-hour		AI	LC ₅₀ > 100 mg/L
Green algae (<i>Desmodesmus subspicatus</i>)	Algal toxicity	72-hour		AI	Biomass EC ₅₀ > 71.77 mg/L

12.2. PERSISTENCE AND DEGRADABILITY

Purpureocillium lilacinum is not rapidly biodegradable.

12.3. BIOACCUMULATIVE POTENTIAL

Purpureocillium lilacinum does not bioaccumulate.

12.4. MOBILITY IN SOIL

Purpureocillium lilacinum is immobile in soil.

12.5. OTHER ADVERSE EFFECTS

No further ecological information is available. See 12.2 above.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Do not contaminate water, food, or feed by storage or disposal.

Product: In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Contaminated packaging: Triple rinse containers. Do not re-use empty containers. Partly-filled packages should be disposed of as hazardous waste.

RCRA Information: Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State, and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14: TRANSPORTATION INFORMATION

NOTE: This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

49 CFR, IMDG, and IATA: Not classified as a dangerous good or as a hazardous material.

14.1. UN NUMBER

None

14.2. UN PROPER SHIPPING NAME

None

14.3. TRANSPORT HAZARD CLASS(ES)

N/A

14.4. PACKING GROUP

N/A

14.5. ENVIRONMENTAL HAZARDS

None. Not a marine pollutant.

14.6. SPECIAL PRECAUTIONS FOR USER

NFPA Rating	Health:	1	Flammability:	0	Reactivity:	0	Special:	Not applicable.
HMIS Rating	Health:	1	Flammability:	0	Physical:	0	PPE:	

Hazard ratings: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

14.7. TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE

Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

EPA/FIFRA:

This product is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements may differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticidal chemicals. The pesticide label also includes other important information, including directions for use. The hazard information required on the pesticide label is reproduced below.

Signal Word: Caution

Hazard Statements: Harmful if swallowed, absorbed through skin, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

OSHA:

N/A

TSCA STATUS:

TSCA Ingredient List:

N/A.

TSCA §12(b) Export Notification (40 CFR §707, Subpart D)

N/A.

CERCLA REPORTABLE QUANTITY:

N/A

SARA TITLE III:

Section 302: N/A
Section 311/312: N/A
Section 313: N/A

RCRA STATUS:

N/A

CWA §307 PRIORITY POLLUTANTS

N/A

SDWA MAXIMUM CONTAMINANT LEVELS (MCLs)

N/A

US STATE RIGHT-TO-KNOW INGREDIENTS

California Proposition 65:

This product does not contain any substances known to the State of California to cause cancer or reproductive harm.

Other State Right-to-Know Lists:

None.

SECTION 16: OTHER INFORMATION

ABBREVIATIONS

OSHA	US Occupational Health and Safety Administration
EPA	US Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)
CWA	Clean Water Act
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
TSCA	Toxic Substances Control Act
MCL	Maximum contaminant limit
PEL	Permissible exposure limit
STOT	Specific target organ toxicity
TLV	Threshold limit value
TWA	Time-weighted average
LD ₅₀	Median lethal dose: dose resulting in 50% mortality in the test species
LC ₅₀	Median lethal concentration: concentration resulting in 50% mortality in the test species
EC ₅₀	Median effective concentration: concentration resulting in 50% reduction in algae growth or algae growth rate, or <i>Daphnia</i> immobilization
PPE	Personal protective equipment
PBT	Persistent, bioaccumulative, and toxic
vPvB	Very persistent, very bioaccumulative
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 (Marine Pollution 1973/1978),

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