

MATERIAL SAFETY DATA SHEET

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Revision No: New MSDS

Scotts® Zyban® WSB

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Scotts® Zyban® WSB
PRODUCT DESCRIPTION: Ornamental Fungicide in Water Soluble Bags

MANUFACTURER

The Scotts Company
Earthgro - Hyponex - Miracle Gro - Scotts
Scotts Sierra - Swiss Farms
14111 Scottslawn Road
Marysville, OH 43041

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (U.S.): (800) 424-9300
International: 1-703-527-3887
Emergency Phone: 1-937-644-0011

EPA REG. NO.: 58185-31 **PN:** 95211

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS#</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Dimethyl [(1,2-phenylene) bis (iminocarbonothioyl)] bis [carbamate] (Thiophanate-methyl)	23564-05-8	None	None
Zinc ion, manganese ethylenebis dithiocarbamate (Mancozeb)	8018-01-7	None	None

COMMENTS: The ACGIH Threshold Limit Values (TLV) for nuisance (inert) dusts containing < 1% crystalline silica and no asbestos are: 10 mg/m3 inhalable particulates and 3 mg/m3 respirable particulate. The OSHA TLV is 15 mg/m3 total dust, 5 mg/m3 respirable fraction.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: - CAUTION

- Avoid contact with eyes, skin, or clothing.
- May cause skin and eye irritation.
- Harmful if swallowed.
- Do not inhale dust.
- KEEP OUT OF REACH OF CHILDREN AND PETS.

POTENTIAL HEALTH EFFECTS

EYES: May cause eye irritation.

SKIN: May cause skin irritation.

INGESTION: May be harmful if swallowed.

INHALATION: Prolonged or excessive inhalation may cause respiratory tract irritation.

MEDICAL CONDITIONS AGGRAVATED: Skin contact may cause allergic reaction in sensitive individuals. Persons with pre-existing skin disorders or impaired respiratory function may be more susceptible to effects of substance.

ROUTES OF ENTRY: Ingestion, skin, inhalation, and eyes.

4. FIRST AID MEASURES

EYES: If in eyes, 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. Call a poison control center or doctor for treatment advice.

SKIN: If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: If swallowed, call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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.

COMMENTS: See product label for specific First Aid Measures. The above measures are the most conservative - Pesticide Registration (PR) Notice 2000-3 - April 11, 2000 - and apply in the event a product label is not immediately available.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water spray, dry chemical.

HAZARDOUS COMBUSTION PRODUCTS: Toxic chlorine and oxides of sulfur, zinc, and nitrogen.

EXPLOSION HAZARDS: May form an explosive dust/air mixture.

FIRE FIGHTING PROCEDURES: Evacuate area. Flood with water. To fight large fires, wear full protective clothing and NIOSH approved self-contained breathing apparatus with full-facepiece operated in the pressure/demand mode.

FIRE FIGHTING EQUIPMENT: Fire-fighters must wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

LARGE SPILL: Extinguish all ignition sources, Ventilate area. Cleanup personnel require protective clothing and respiratory protection.

GENERAL PROCEDURES: Avoid dusting or misting condition during cleanup. If material is uncontaminated, collect and reuse as recommended for product. If contaminated, put in appropriate container and dispose according to local, state, or Federal regulations. Keep spills away from drinking water supplies. After spill cleanup, flush area with water. Read label

7. HANDLING AND STORAGE

GENERAL PROCEDURES: PESTICIDE APPLICATORS AND WORKERS must use this product only in accordance with its labeling and with the Worker Protection standard, 40 CFR part 170. This standard contains requirement for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. The requirements that immediately follow apply to uses of this product that are covered by the Worker Protection Standard: 1.) Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours; 2.) PPE required for early entry to treated areas that is permitted under the Worker Protection act Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: coveralls, waterproof gloves, shoes and socks. For non-agricultural uses: 1.) **KEEP CHILDREN AND PETS** off treated areas until dry or material has been washed into soil; 2.) Do not enter treated areas without protective clothing until sprays have dried.

HANDLING: See label. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. **KEEP OUT OF REACH OF CHILDREN.**

STORAGE: Read label. Store away from feed and foodstuffs as well as household cleaning products. Do not store at a temperature exceeding 122F (50C). Store in a dry place in a well-closed container. Do not allow to become wet or overheated in storage. This may cause chemical changes which will impair the fungicidal effectiveness of ZYBAN® and may also generate flammable vapors. Handle container carefully when stored at temperatures of less than 50F to avoid breakage of inner water soluble bags. **KEEP OUT OF REACH OF CHILDREN.**

STORAGE TEMPERATURE: <122F (50C)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Use of chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible is recommended. Contact lenses should not be worn when working with this material. Running water/eyewash station should be available in case material get in eyes.

SKIN: Read and follow label instructions. Applicators and other handlers must wear: Long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks.

RESPIRATORY: Use a NIOSH approved pesticide respirator (combination organic vapor cartridge and pesticide particulate pre-filter) for exposures up to concentrations of 0.5 mg/m³. For greater exposures, use a self-contained breathing apparatus operated in the pressure/demand mode. Read and follow label instructions.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Powder
ODOR: Musty
COLOR: Yellow
pH: 6.0-6.3
BOILING POINT: Decomposes on heating
SOLUBILITY IN WATER: Soluble
DENSITY: 0.398 g/ml

10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

CONDITIONS TO AVOID: Ignition sources and extreme heat. Contact with strong oxidizers, acids, bases, and salt suspensions.

STABILITY: Stable

POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION PRODUCTS: Chlorine and oxides of sulfur, zinc, and nitrogen.

INCOMPATIBLE MATERIALS: Oxidizing agents (permanganate, dichromate, nitrate, chlorine), acids, bases, and salt suspensions.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: Thiophanate-methyl, has a reported LD50 >10,000 mg/kg and mancozeb, >5,000 mg/kg in the rabbit; Product LD50, >2 g/kg (rabbit).

ORAL LD₅₀: Thiophanate-methyl has a reported oral LD50 of 5,000 mg/kg, mancozeb, >5,000 mg/kg in rats. Product LD50: >5 g/kg (rats).

INHALATION LC₅₀: Thiophanate-methyl has a reported LC50-1 (rat) of 10.2 mg/L and LC50-4 in the rat >1.8 mg/L air. The LC50 for mancozeb is >5.14 mg/L air (rat) for 4 hr. Product LC50-4 (rat): >2.4 mg/L air.

EYE EFFECTS: Mancozeb: moderately irritating; Thiophanate-methyl: mildly irritating. Product: Mild irritation (rabbit).

SKIN EFFECTS: Mancozeb: Practically non-irritating; Thiophanate-methyl: Practically non-irritating; Product: Non-irritating (rabbits).

SENSITIZATION: Mancozeb causes skin sensitization in guinea pigs when tested in the Guinea Pig Maximization Test but not when tested in the Buehler Test. Consequently, mancozeb may have weak dermal sensitization potential in humans. The product was not a dermal sensitizer (Modified Buehler Method - guinea pig).

SUBCHRONIC:

Repeated exposure to mancozeb at high doses affects the thyroid, liver, and nervous system in laboratory animals. The No Observed Adverse Exposure Level (NOAEL) from long-term feeding studies with mancozeb is 5 mg/kg/day.

CARCINOGENICITY:

IARC: No

NTP: No

OSHA: No

CARCINOGENICITY COMMENTS: Mancozeb is classified as a Group B (Possible Human Carcinogen) by the USEPA. A two-year feeding study of mancozeb in rats produced an increased incidence of thyroid tumors at 750 ppm (29 mg/kg/day). No evidence of carcinogenicity was observed in long-term studies with mice. Information on the mechanism of the observed thyroid tumors for this chemical class indicates these tumors are not relevant to humans at likely exposure levels.

MUTAGENICITY: Mutagenic and reproductive effects of thiophanate-methyl are reported in the NIOSH Registry of Toxic Effects. Mutagenic and teratogenic effects of Mancozeb are also reported.

REPRODUCTIVE EFFECTS: No reproductive effects occurred below exposure levels high enough to produce non-reproductive toxic effects in two-generation reproduction studies of mancozeb in rats.

COMMENTS: Zyban® acute toxicity data from studies performed for The Scotts Company by Bioresearch Incorporated, Philadelphia PA, Project 95-8215A, 1995. Mancozeb toxicity information from Dithane™ M-45 MSDS, Rohm and Haas Company, 02/21/01. Thiophanate-methyl acute toxicity information from Topsin® M 70W Fungicide MSDS, Elf Atochem, 08/95.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: This product is toxic to fish. 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.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of according to applicable Federal, State, or local procedures. Do not contaminate water, feed, or food, by storage or disposal. Open dumping is prohibited.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: This product is not DOT regulated when transported over land in non-bulk packaging.

MARINE POLLUTANT #1: Mancozeb: Marine Pollutant

OTHER SHIPPING INFORMATION: Product classified as an Environmentally hazardous substance, solid, n.o.s., 9, UN3077, PGIII, Marine Pollutant (Mancozeb) -only when transported in bulk or by vessel over water. RQ for mancozeb: None; RQ for thiophanate-methyl: None.

SPECIAL SHIPPING NOTES: The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

15. REGULATORY INFORMATION

PROPOSITION 65 STATEMENT: This product contains chemicals known to the State of California to cause cancer (mancozeb), or reproductive harm (thiophanate-methyl).

16. OTHER INFORMATION

REVISION SUMMARY New MSDS

NFPA CODES

HEALTH: 3 FIRE: 0 REACTIVITY: 1

MANUFACTURER DISCLAIMER: The information contained herein is, to the best of the Manufacturer's (see Section 1) knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and the Manufacturer shall not be liable for any loss or damage arising out of the use thereof. No authorization is given or implied to use any patented invention without a license. In addition, the Manufacturer shall not be liable for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

ADDITIONAL MSDS INFORMATION: NFPA Hazard Rating: 0=Least; 1=Slight; 2=Moderate; 3=High; 4=Severe.

GENERAL STATEMENTS: This document contains health, safety, and environmental information useful to emergency response agencies, health care providers, manufacturers, and workers/employees. It does not replace the precautionary language, use directions, or the storage and disposal information found on the product label.

COMMENTS: Use of this product is regulated by the U.S. Environmental Protection Agency (EPA) through the approved product label. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.