

Material Safety Data Sheet  
May be used to comply with  
OSHA's Hazard Communication Standard,  
29 CFR 1910.1200. Standard must be consulted  
for specific requirements.

U.S Department of Labor  
Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

IDENTITY (As Used on Label and List)  
**Bonide Mancozeb Flowable w/ Zinc**

**ID No. 7071564**  
Date: November 12, 1998

## Section I

Bonide Products, Inc.	(800) 424-9300
2 Wurz Ave.	(315) 736-8231
Yorkville, NY 13495	

## Section II - Hazardous Ingredients/Identity

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits	% (Optional)
Ethylene-bis-dithiocarbamate manganese salt	1 mg/M3			

## Section III - Physical/Chemical Ingredients

BOILING POINT: NA	VAPOR PRESSURE (mm Hg): NA
VAPOR DENSITY (Air=1): NA	SPECIFIC GRAVITY: NA
SOLUBILITY IN WATER: NA	% VOLATILE BY VOLUME: NA
EVAPORATION RATE: NA	MELTING POINT: NA
APPEARANCE AND ODOR: Tan powder (dust), musty odor	

## Section IV - Fire and Explosion Data

FLASHPOINT: NA  
LEL: ----- UEL: -----  
EXTINGUISHING MEDIA: Water spray, Water fog, Dry Chemical, CO2  
FIRE FIGHTING INSTRUCTIONS: Wear approved self-contained breathing equipment.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Toxic and flammable gases may be evolved when material is heated to 80 C (176 F).

## Section V - Reactivity Data

STABILITY: Stable  
CONDITIONS TO AVOID: Avoid acids and oxidizing heat agents.  
CONDITIONS TO AVOID: Keep dry and avoid excessive  
HAZARDOUS POLYMERIZATION: May occur

## Section VI - Health Hazard Information

THRESHOLD LIMIT VALUE OR LD50/LC50: 1 mg/M3 for Ethylene bis dithiocarbamate  
EFFECTS OF OVEREXPOSURE: Exposure to dust will irritate eyes, nose and throat. Repeated or prolonged contact will cause skin irritation.  
EMERGENCY AND FIRST AID PROCEDURES: INHALATION: Move subject to fresh air, maintain breathing.  
EYES: Flush eyes with water for 15 minutes. Get medical attention.  
SKIN: Wash exposed skin with soap and water. If irritation develops, get medical attention.

## Section VII - Precautions for Safe Handling/Use

RESPIRATORY PROTECTION (Specify type): Wilson Agritox #2 respirator with R21 Cartridge and R15 filter  
VENTILATION: LOCAL EXHAUST: Preferred MECHANICAL (General): Acceptable  
PROTECTIVE GLOVES: Impervious gloves EYE PROTECTION: Safety glasses with sideshield  
OTHER PROTECTION EQUIPMENT: Wear washable work clothes to be washed before reuse.  
HANDLING AND STORAGE: Keep away from fire, sparks and hot surfaces. Do not contaminate food, feed, domestic water, ponds, streams or sewers.  
OTHER PRECAUTIONS: Keep out of reach of children. Wash thoroughly before eating, drinking or smoking.

**Section VIII - Environmental and Disposal Information**

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SPILL OR LEAK PROCEDURES: Wearing approved respirator, sweep and shovel product into containers for use or disposal.

WASTE DISPOSAL METHOD: Dispose of waste in an approved chemical disposal site.

**KEEP OUT OF REACH OF CHILDREN****ABBREVIATION KEY**

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N/A: NOT AVAILABLE OR APPLICABLE

N/E: NOT ESTABLISHED

TLV: THRESHOLD LIMIT VALUE

TWA: TIME WEIGHTED AVG./8 HOUR WORKDAY

STEL: SHORT TERM EXPOSURE LIMIT

D.O.T.: DEPARTMENT OF TRANSPORTATION

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